

FT MEADE

VA 53

.A7

1907a

Copy 2

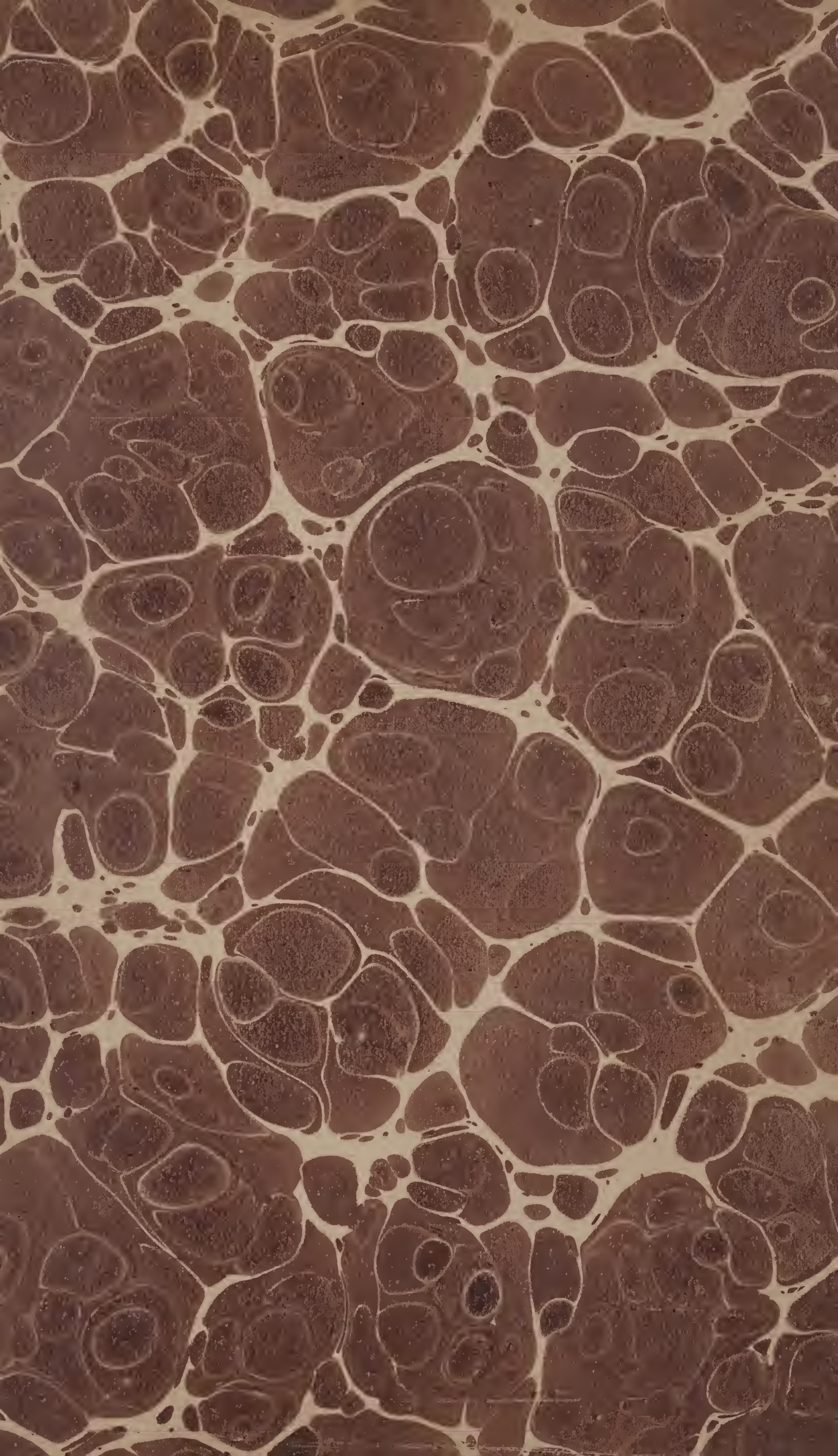


Class VA 53

Book A7

1907a

copy 2



2

HEARINGS

BEFORE THE

576
525

COMMITTEE ON NAVAL AFFAIRS

OF THE

U.S. HOUSE OF REPRESENTATIVES

ON

ESTIMATES SUBMITTED BY THE SECRETARY OF THE NAVY.

1906-1907.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.

1907.

copy 2

100-1000000

VA33
A7
1907a
copy 2

JAN 11 1907
D. of D.

TMP92-007441

Log 1-11-06
HJ

[No. 1.]

BUREAU OF NAVIGATION—STATEMENT OF REAR-ADMIRAL
GEORGE A. CONVERSE.

COMMITTEE ON NAVAL AFFAIRS,
Washington, D. C., December 10, 1906.

The committee met at 10.30 a. m., Hon. George E. Foss (chairman) in the chair.

The CHAIRMAN. We start in with pay of the Navy, "Pay and allowances prescribed by law of officers on sea duty." I see this year you have stricken out the next three words, "officers on shore."

Admiral CONVERSE. Yes.

The CHAIRMAN. What is the reason for that?

Admiral CONVERSE. The abolishing of the distinction or discrimination of 15 per cent less pay on shore makes the pay on shore the same as the pay on sea duty, and that renders those words unnecessary.

The CHAIRMAN. There seems to be no change, then, in last year's law until we get down to page 3, where the number of men is 37,500 instead of 34,500, an increase of 3,000.

Admiral CONVERSE. That is what we asked for last year, but it was not granted.

The CHAIRMAN. How are you in the matter of enlistments of men?

Admiral CONVERSE. About 4,500 short now, just at present. But we have established more recruiting stations than we have had before, and the recruiting should begin to yield better results from this time on.

The CHAIRMAN. Do you think you will need this full increase of 3,000 men this coming year?

Admiral CONVERSE. That will depend very much on circumstances. There are a great many causes which are influencing and retarding the increase, among which is desertion, just at the present time. First, you may say, is the prosperity of the country. The second is the law which requires all persons under 18 years of age presenting themselves for enlistment to produce a certificate of age or evidence other than their own statements that they are of the age required. Then there are the unfortunate reports that have been published in the papers in regard to mutinies, and so forth, on board ship—notably that recently on the *Tennessee*—absolutely without foundation, absolutely, but published in the South with very large headlines. Columns were devoted to it, and it has practically stopped enlistments there. Other causes have influenced or retarded enlistments.

We have here in my annual report the number of applicants we received in the various cities throughout the United States, the number that we rejected for various causes, the number that failed to present themselves for enlistment after having passed because many of them could not produce certificates of birth, and finally, the number that were accepted. We had altogether last year 40,918 applicants for enlistment, of whom we really enlisted only 13,418, rejecting the others for various causes—physical disability, undesirability, inability to produce a good record, etc.

Mr. LOUDENSLAGER. What was the number enlisted?

Admiral CONVERSE. Thirteen thousand four hundred and eighteen.

The CHAIRMAN. This is in your report?

Admiral CONVERSE. Yes, sir.

Mr. LOUDENSLAGER. How many were discharged and deserted during the year?

Admiral CONVERSE. The total number of discharges, retirements, and deaths was 8,701.

Mr. KITCHIN. Can you tell how many were desertions?

Admiral CONVERSE. Yes, sir. The total number of desertions was 3,998. The percentage of desertions based on the total number of men in the service was 9.04 per cent.

Mr. LOUDENSLAGER. Three thousand nine hundred and ninety-eight?

Admiral CONVERSE. Yes.

Mr. LOUDENSLAGER. Which made a little over 9 per cent?

Admiral CONVERSE. Yes; 44,222 was the total number of men in the Navy.

Mr. LOUDENSLAGER. That was the total number of men in the Navy?

Admiral CONVERSE. Yes. We had when we started in at the beginning of the year 32,000, and we enlisted something like 13,000 additional men. We have to take into consideration all those new men who had an opportunity to desert. That is the way the percentage is worked out. The total number of men who enlisted during the year plus the number that we had at the beginning of the fiscal year was taken and the percentage of desertions figured out on that basis. The number of desertions is given in my report by ships and stations.

Mr. LOUDENSLAGER. You have not any of those reports here?

Admiral CONVERSE. Yes; they have been sent to every member of the committee.

Mr. KITCHIN. How many men are there in the Navy now?

Admiral CONVERSE. About 32,000—a little over 32,000. We are lower just now than for some time on account of the withdrawing of two of our heavy ships from China and bringing them home with men whose terms of service have expired. The *Ohio* and the *Wisconsin* brought home 800 men each, and they have been discharged. Most of them were overtime, and the remainder were short-service men.

Mr. LOUDENSLAGER. I understood you—perhaps misunderstood you—that you had an authorization of 4,500 more men than you have enlisted.

Admiral CONVERSE. Yes; more than we have got.

Mr. LOUDENSLAGER. How would that make 32,000 in the service, then?

Admiral CONVERSE. Because we are entitled to 37,000 men—the authorized enlisted men and apprentices at training stations as well as in the active fleet.

Mr. KITCHIN. Let me ask you right there, how many men will be necessary when you complete the ships that we now have?

Admiral CONVERSE. That was in my report of last year, and it has not materially changed since then. There has been hardly any change. To man the active fleet as it will stand when the vessels now authorized are built will require 37,283 men, the first reserve 3,309, and on shore stations 1,219, making a total of 41,811. That contemplates putting in reserve a large number of the ships which have been in commission or have been built since 1894.

The CHAIRMAN. Can you put those details in your hearing?

Admiral CONVERSE. Yes, sir. The appended table will show the number of enlisted men which will be required when the ships now under construction are completed.

A. Active fleet	37, 283
B. First reserve	3, 309
C. Shore stations	1, 219
Total	41, 811
To put ships of first reserve in commission and man all colliers with naval crews, add	7, 827
To put ships of second reserve in commission, add	1, 986
Men in training, in transit, and in hospitals (sick)	8, 250
Grand total	59, 874
Under present law the enlistment force allowed is	37,000
Shortage January 1, 1908	22, 874
Add for battle ships <i>South Carolina</i> and <i>Michigan</i> appropriated for, to be completed about January 1, 1910	1, 600
Total shortage, 1910	24, 474

Mr. LOUDENSLAGER. I would like to ask you a question. The Admiral said some time ago why they were unable to have a greater enlistment in the Navy, naming the causes that operated against it.

The CHAIRMAN. I suggest that that would come up later under the suggestions on recruiting.

Mr. LOUDENSLAGER. Very well.

The CHAIRMAN. On page 4 we find this proviso:

Provided, That section seventeen of an act approved March third, eighteen hundred and ninety-nine, to reorganize and increase the efficiency of the personnel of the Navy and Marine Corps of the United States, which section reads as follows: "*And provided further*, That applicants for retirement under this section shall, unless physically disqualified for service, be at least fifty years of age," be, and the same is hereby, repealed.

Admiral CONVERSE. Yes, sir.

The CHAIRMAN. Will you kindly explain the purport of that provision.

Admiral CONVERSE. A boy enters the naval service as an apprentice at 15 years old and he will have to serve for thirty-five years before he retires. A man who enters the service at 25 years of age has only to serve twenty-five years before he can retire. Therefore it works a great injustice against the man who entered the service young.

Mr. MUDD. Would you not want to have some law regulating that?

Admiral CONVERSE. We want to have stricken out this provision in regard to 50 years of age.

Mr. LOUDENSLAGER. What would it be then? What would the law be then for retirement?

Admiral CONVERSE. For so many years' service.

Mr. MUDD. Is there any provision of existing law regulating that, if this be stricken out?

Admiral CONVERSE. The following addition has been added to the language of the act to regulate retirements of enlisted men hereafter:

Provided, That section 17 of an act approved March 3, 1899, to reorganize and increase the efficiency of the personnel of the Navy and Marine Corps of the United States, which section reads as follows: "*And provided further*, That applicants for retirement under this section shall, unless physically disqualified for service, be at least fifty years of age," be, and the same is hereby, repealed.

The Bureau considers that the requirement that an enlisted man, unless physically disqualified for service, must be 50 years of age before becoming entitled to the privileges of retirement works a great injustice to the men of the Navy in comparison with the practice now prevailing in the Army and Marine Corps. In those two branches a man may retire after a service of thirty years without regard to his age, and, further, in computing this period of service time spent aboard ship or abroad counts double, which last privilege is not afforded the Navy.

Mr. LOUDENSLAGER. Then there would be no regulation in regard to the retirement if this was repealed?

Admiral CONVERSE. Yes.

Mr. LOUDENSLAGER. Does it apply to the Navy?

Admiral CONVERSE. I think it does.

Mr. LOUDENSLAGER. You did not read it there. You read what applied to the Army and Marine Corps.

Admiral CONVERSE. It was my proposition to repeal that part of the act of March 3, 1899 requiring that applicants for retirement shall be 50 years of age. If we can get that act, we can see exactly how it reads. What we want is to put the Navy on an equality with the Army and the Marine Corps.

The CHAIRMAN. Would this do it?

Admiral CONVERSE. Yes.

Mr. LOUDENSLAGER. In this particular feature?

Admiral CONVERSE. Yes. Section 17 of the personnel bill reads as follows:

SEC. 17. That when an enlisted man or appointed petty officer has served as such thirty years in the United States Navy, either as an enlisted man or petty officer, or both, he shall, by making application to the President, be placed on the retired list hereby created, with the rank held by him at the date of retirement; and he shall thereafter receive seventy-five per centum of the pay and allowances of the rank or rating upon which he was retired: *Provided*, That if said enlisted man or appointed petty officer had active service in the Navy or in the Army or Marine Corps, either as volunteer or regular, during the civil or Spanish-American war, such war service shall be computed as double time in computing the thirty years necessary to entitle him to be retired: *And provided further*, That applicants for retirement under this section shall, unless physically disqualified for service, be at least fifty years of age.

That last proviso does not, I believe, apply either in the Army or the Marine Corps. It works injustice to the young men of the Navy.

Mr. LOUDENSLAGER. It occurs to me that this would mean that the

whole section would be repealed, would it not, and we should make it apply only to that part of section 17 which reads so-and-so?

The CHAIRMAN. The words "that part of" should be inserted before the words "section 17."

Mr. LOUDENSLAGER. Yes.

Admiral CONVERSE. Yes.

The CHAIRMAN. The next is "Pay, miscellaneous." That is the Paymaster-General's affair, is it?

Admiral CONVERSE. Yes.

The CHAIRMAN. Then we pass over to page 12:

Bureau of Navigation. Transportation, recruiting and contingent. Transportation: For travel allowance of enlisted men discharged on account of expiration of enlistment.

That is new language.

Admiral CONVERSE. Yes, sir.

The CHAIRMAN. Will you kindly explain that.

Admiral CONVERSE. This additional clause is inserted in order that the proviso in the current act authorizing the payment of 4 cents a mile to enlisted men on discharge or expiration of enlistment may be omitted. It is not necessary that this proviso be continued in the act, and the additional clause above quoted is recommended as a substitute. Before the law was passed giving men discharged on account of expiration of enlistment 4 cents a mile they were allowed actual expenses to the place of enlistment. Now they are on an equality with the Army and the Marine Corps so far as receiving mileage is concerned.

The CHAIRMAN. Was that done last year?

Admiral CONVERSE. Yes.

Mr. LOUDENSLAGER. Which way is the most expensive?

Mr. KITCHIN. This is the law now, so that it does not make any difference about which is the most expensive.

Admiral CONVERSE. We are paying more for transportation this year than last year. We have not been able to make the special rates with various transportation companies that we were able to make prior to July 1.

The CHAIRMAN. You are asking for an increase in this provision?

Admiral CONVERSE. Yes.

The CHAIRMAN. Last year we appropriated \$380,000, and this year you are asking for \$450,000, an increase of \$70,000. What does that arise from?

Admiral CONVERSE. A very considerable increase in this appropriation is absolutely necessary from the fact that although the railroad rates, which apply to private transportation both as regards passengers and freight, are probably less than heretofore, the Government has not succeeded in procuring the favorable rates it has had in contracts for previous years, and in fact in many instances the rates which apply to Government transportation are the same as those which govern private transportation.

Another reason for the necessity in increasing the appropriation for transportation is the fact that at the present time the greater number of enlistments occur at interior points in the country, and the transportation of recruits to the seaboard has added greatly to the expenditures under this appropriation.

Also all these estimates are based on the strength of 40,000 men.

The CHAIRMAN. Can we safely reduce that recommendation, \$450,000?

Admiral CONVERSE. Not if you give us 40,000 men.

The CHAIRMAN. If we should reduce the number of men, of course we could reduce the amount of this appropriation, then, could we?

Admiral CONVERSE. Yes; but only a small amount. Certain of these increases——

Mr. LOUDENSLAGER. To get the maximum of your 40,000 you will have to double the enlistment which you had this year?

Admiral CONVERSE. Yes.

Mr. LOUDENSLAGER. Which is not probable, is it?

Admiral CONVERSE. It depends on the condition of the crops they have out west and the demand for labor, and also on the repeal of the law requiring a birth certificate before enlistment.

Mr. LOUDENSLAGER. You think it is possible?

Admiral CONVERSE. I think it is possible; yes, sir. We are endeavoring to offer additional inducements to men to enter and remain in the Navy.

The CHAIRMAN. The next is——

Recruiting: Expenses of recruiting for the naval service; rent of rendezvous and expenses of maintaining the same; advertising for and obtaining men and apprentice seamen; actual and necessary expenses in lieu of mileage to officers on duty with traveling recruiting parties, one hundred and twenty-one thousand three hundred and forty dollars.

You are asking for the same as last year?

Admiral CONVERSE. The same as last year.

The CHAIRMAN. I want to ask you about that proviso that was inserted by the House——

That no part of this appropriation shall be expended in recruiting seamen, ordinary seamen, or apprentice seamen unless a certificate of birth or written evidence, other than his own statement, satisfactory to the recruiting officer, showing the applicant to be of age required by naval regulations shall be presented with the application for enlistment.

How has that worked since it was passed?

Admiral CONVERSE. The estimate, as near as we could calculate it, for the first month after it went into effect was a loss of somewhere near 30 per cent. Since then we have been keeping a regular list of those who failed to present evidence of age and were rejected. For the months of July and August at the station at Boston and the various substations there were 1,752 candidates presented themselves, and of that number 200 passed. There were 966 who failed to present evidence of age and were rejected at Boston and substations during the months of July and August.

In September there were 340 who failed to produce such evidence, in October there were 353, and in November 240. That is the way it works at every station that we have. We are keeping the record accurately to see how many are unable to produce this evidence. This deterrent to enlistment has, however, been somewhat mitigated by the decision of the Secretary of the Navy, based upon the opinion of the Judge-Advocate-General as issued in a circular letter which closed as follows:

In this view of the matter the attention of recruiting officers should be called to the fact that the purpose of the provision is distinctly to prevent enlistments

under age; that such written evidence must in every case be required as will show to the satisfaction of the recruiting officer that the applicant is of lawful age, but that in cases where it is obvious to the recruiting officer that the applicant is of lawful age, and where the examining medical officer so certifies in writing, the applicant may be enlisted. The Department considers that such official statement, over the signature of the examining medical officer, should be accepted as meeting the requirements of the act where, for any reason, as is frequently the case, certificate of birth can not be produced.

It is noted that the act expressly provides that the evidence contemplated is to be written; is to be in addition to the statement of the applicant, and is to be satisfactory to the recruiting officer. The last clause of this provision vests a degree of discretion in the recruiting officer in dealing with this matter, and it was doubtless the purpose of the Congress to effect, through a wise exercise of such discretion, the object of the clause without causing unreasonable embarrassment to the service.

Most recruiting officers, however, are very apt to err on the safe side, and are unwilling to accept any man unless they can get very good testimony in regard to his age.

The CHAIRMAN. Then you do not recommend that provision this year?

Admiral CONVERSE. I recommend that that provision in regard to certificates of birth be stricken out. You will find a statement in regard to it in my report, on page 29.

The CHAIRMAN. How is it in this regard in the Army?

Admiral CONVERSE. They enlist men between the ages of 18 and 35 years on first enlistment.

The CHAIRMAN. Have they any provision of this kind?

Admiral CONVERSE. I do not know.

The CHAIRMAN. Will you kindly look it up and see whether they have any such provisions?

Admiral CONVERSE. Yes, sir; if you wish.

The CHAIRMAN. The next is, "Contingent: Advertising, telegraphing on public business," and so forth.

Mr. LOUDENSLAGER. Have we gotten through with this recruiting? I thought you were going to ask a question or two in regard to that, and I would like to ask one or two.

The CHAIRMAN. Very well.

Mr. LOUDENSLAGER. I would like to ask a question or two of the Admiral. He spoke some time ago about the influence that operated against the enlistment of men in the service, and said that he thought that the increase in the enlistments for the coming year would be considerable. Do you think that this influence against enlistments will be eliminated?

Admiral CONVERSE. We may not continue to have, possibly, as favorable crops as we have had the last two or three years, or the demand for people to enter the railroad service may not be as great; the railroads must be getting very nearly all the men they require now. Just at present it is hard to get men for anything, even at the navy-yards. In one of the Omaha papers, for instance, there appeared not long ago right alongside of our advertisement which offered from \$20 to \$70 a month for men, five or six others offering from \$70 upward for men on railroads, and calling attention to the fact, as a further inducement, that men starting in as brakemen and firemen could work up to conductors and other higher positions. I do not suppose that that can continue forever.

Mr. LOUDENSLAGER. Is it not said in a general report of the industrial system of the country that most of these establishments have already all that they can use?

Admiral CONVERSE. Industrial establishments?

Mr. LOUDENSLAGER. Yes.

Admiral CONVERSE. Yes, sir.

Mr. LOUDENSLAGER. Does not the report say that they are completely congested?

Admiral CONVERSE. I have not gone into that sufficiently to say.

Mr. LOUDENSLAGER. You can not get Congress to handle that.

Admiral CONVERSE. I am speaking of our men and the influences that cause men to desert. Men sometimes go home. We give them ten days' leave and travel time, and they are offered \$2.50 a day to help harvest the grain; but that only lasts four or five weeks—whatever it may be—and by that time they are deserters.

Mr. LOUDENSLAGER. Are there any additional efforts to be put forth by you in this matter?

Admiral CONVERSE. Yes; we propose to increase the number of recruiting stations throughout the country as fast as officers are available for the purpose. That is what we are doing now. We have a small vessel, a tender to the training station at Newport, which is used in summer for training apprentices. We shall not need it there this winter, and we have started her down the coast to go up the Mississippi River.

Mr. LOUDENSLAGER. Are there any other ways?

Admiral CONVERSE. Yes; by increasing the number of stations, and, as I said before, the inducements to enter and remain in the service.

Mr. LOUDENSLAGER. That is all?

Admiral CONVERSE. Yes.

Mr. LOUDENSLAGER. Does that increase the expense at all?

Admiral CONVERSE. Yes, slightly, with every station.

Mr. LOUDENSLAGER. Where does that increased pay come from? What appropriation do you pay that from?

Admiral CONVERSE. From this appropriation.

Mr. LOUDENSLAGER. You have not asked for any increase here.

Admiral CONVERSE. Because we did not expend all that we had last year. We could not get officers to put in the field.

Mr. LOUDENSLAGER. How much balance have you on that?

Admiral CONVERSE. The balance is \$7,008.

The CHAIRMAN. You say you enlisted how many men last year?

Admiral CONVERSE. Thirteen thousand four hundred and eighteen, all told.

Mr. LOUDENSLAGER. It would net about 5,000 men, would it not?

Admiral CONVERSE. It would net about 5,000 above the number of discharges, desertions, and deaths. Thirteen thousand four hundred and eighteen men were enlisted last year.

The CHAIRMAN. But from the present quota you are to-day short about 3,500?

Admiral CONVERSE. Four thousand five hundred, somewhere about that. The figures change every week.

The CHAIRMAN. If your enlistments are not any more this year than last year, how much short of the quota will you be?

Admiral CONVERSE. Probably from 2,000 to 3,000.

The CHAIRMAN. Short of the quota?

Admiral CONVERSE. Of the authorized quota.

The CHAIRMAN. Of the 37,000?

Admiral CONVERSE. Of the 37,000, all told.

Mr. KITCHIN. And if it was a certainty that there would be 3,000 short, this appropriation need not be increased?

Admiral CONVERSE. No, sir; not if it were certain. But it is always desirable to catch fish when you can; I mean by that if the conditions to recruit are favorable it is desirable to do so.

The CHAIRMAN. What do you figure out these men cost?

Admiral CONVERSE. Thirty dollars a month.

The CHAIRMAN. Three hundred and sixty dollars a year?

Admiral CONVERSE. Yes; \$360 a year.

The CHAIRMAN. Here are some new words in the bill: "Purchase of gymnastic apparatus." What is the necessity for that? Where do you use it?

Admiral CONVERSE. When a large number of enlisted men are in the neighborhood of a navy-yard, due to a visit of a number of naval vessels or to the fact that they are attending classes under instruction, the Bureau believes that it would greatly add to their recreation and contentment if it could purchase simple gymnastic apparatus, such as parallel bars, flying rings, pulley weights, and the like.

We are developing athletics among the men in the Navy now, and find it necessary to do so, as we no longer have masts and sails, when the men used to get plenty of exercise by running aloft and working. Therefore, to take the place of that we encourage athletics of every kind and put the men through a regular physical drill twice a day on ship and on shore and encourage them in playing ball, or in anything else that makes for the development of muscle or the training of the body. We have a school for the instruction of firemen that has just been started at Norfolk. We have sent men there after being reenlisted as firemen of the first class who desired to be instructed as machinists, machinists' mates, and oilers.

The CHAIRMAN. The next is—

Gunnery exercises: Prizes, trophies, and badges for excellence in gunnery exercises and target practice; for the establishment and maintenance of shooting galleries, target houses, targets, and ranges; for hiring established ranges, and for transportation of civilian assistants to and from ranges.

Heretofore that has been "men and equipment." What is the necessity for that?

Admiral CONVERSE (reading):

The words "civilian assistants" have been substituted for the word "men" as more clearly defining the scope of that portion of the appropriation. It is occasionally necessary to transport markers and workmen to and from ranges, and provision was accordingly made under the appropriation authorizing such a proceeding. The word "men" is subject to construction as meaning enlisted men of the Navy when it is intended to apply only to civilians.

Mr. KITCHIN. That would strike out the "equipment" altogether, would it not, Admiral? You would substitute "civilian assistants" for "men and equipment."

Admiral CONVERSE. It should be "civilian assistants and equipment."

The CHAIRMAN. The next reads:

For expenses incidental to entering and training navy team and competing in rifle matches; for stationery and printing in connection with gunnery training, one hundred and twenty thousand dollars.

Admiral CONVERSE. I have no recollection of striking out the words "and equipment."

Mr. KITCHIN. So that you desire the words "civilian assistants and equipment?"

Admiral CONVERSE. Yes, sir; I want it to read "civilian assistants and equipment to and from ranges."

Mr. LOUDENSLAGER. You do not want transportation for the men, then?

Admiral CONVERSE. No.

The CHAIRMAN. The estimate as sent here to Congress shows that the word "equipment" was stricken out.

Admiral CONVERSE. I happened to be on other duty, and did not see the revised estimate. It should read, "For transportation of civilian assistants and equipment to and from ranges." That is what we intended.

The CHAIRMAN. What have you to say about what follows:

For expenses incidental to entering and training navy team and competing in rifle matches.

Admiral CONVERSE (reading):

That is added for the reason that there are certain expenses incident to entering navy teams in rifle competition which are necessary and which should clearly come out of the appropriation for gunnery exercises. These expenses are not large, but they must be incurred if the practice of entering teams in rifle competition is to be continued, and it is therefore advisable to embody provision for them in the wording of the appropriation bill. In view of the keen competition in these matches and the fact that the most expert marksmen in the United States must be met, the navy team is assembled about two months before the match and must be kept under training and practice daily until it comes off. This involves the purchase of tents, tent equipage, score books, and other articles.

Mr. KITCHIN. From what fund have these expenses heretofore been paid?

Admiral CONVERSE. They have been paid out of appropriation for "Gunnery exercises."

Mr. KITCHIN. Which is the same fund under discussion now?

Admiral CONVERSE. Yes.

The CHAIRMAN. Has there been any question with the Comptroller about the payment of these things?

Admiral CONVERSE. I do not think so.

Mr. CALLAHAN. This was recommended last year.

The CHAIRMAN. The next is, "For stationery and printing in connection with gunnery training."

Have you not a fund in your Bureau out of which you pay for all printing?

Admiral CONVERSE. Yes; the Department has a printing fund.

The CHAIRMAN. Why could not the printing be done under that?

Admiral CONVERSE. It could be done under that.

The CHAIRMAN. There is a disposition in the House to have one fund for printing and not to have it divided up.

Admiral CONVERSE (reading):

Under the phrase "for stationery and binding" it is proposed to pay for the large quantity of mimeograph supplies used, and also pay for such printing relating to gunnery exercises as may be found necessary, thus relieving the printing fund of the Department from an expense which should properly be defrayed from the appropriation for gunnery exercises.

It is largely confidential matter that we have printed in relation to target practice and gunnery exercises. One point raised was that in case of urgency the printing could be gotten out rapidly by private firms if the Government Printing Office was rushed with work during the busy season. All reports in regard to matters as to gunnery practice on board ships are confidential communications, and should be prepared and sent out promptly.

Mr. LOUDENSLAGER. There are no cases, however, where such confidential matter in other cases leaks at the printing office?

Admiral CONVERSE. No, sir.

Mr. LOUDENSLAGER. To any great degree.

Admiral CONVERSE. Not at all. We found that one confidential document went to the wrong division of the Navy Department, was opened, and had circulated around the Department for some time before it came to the right place.

Mr. LOUDENSLAGER. That was all in the family, though?

Admiral CONVERSE. Yes; it was all in the family, but confidential matters should go direct to the proper place.

The CHAIRMAN. The next is "Outfits on first enlistment: Outfits for all enlisted men and apprentice seamen of the Navy on first enlistment, at sixty dollars each," instead of \$45 each.

Admiral CONVERSE. Yes, sir.

The CHAIRMAN. And there is a change from \$567,000 to \$720,000. Why do you ask for an increase there?

Admiral CONVERSE. The cost of everything for the Navy has jumped up very much from 1897, when it was fixed, to the present time. Overshirts were then issued at \$2.40 apiece. They now cost \$2.75. Undress jumpers were then \$1.36. They are now \$2.10. Blue trousers were then \$2.65. They are now \$4.25. Dress trousers, white, were then \$1.02. They are now \$1.05. A jersey which then cost \$1.38 now costs \$1.50. An overcoat has advanced in price from \$8.17 to \$10.25. So the total cost of the outfit now, including rubber boots, and so forth, is about \$66.95.

The CHAIRMAN. What was it before?

Admiral CONVERSE. Forty-eight dollars and eighty-seven cents.

The CHAIRMAN. Now, do you need all of this money, this \$720,000?

Admiral CONVERSE. Yes, sir.

The CHAIRMAN. Take that appropriation of \$567,000 of last year; did you use all of that, or will you use it all? Will there be an unexpended balance?

Admiral CONVERSE. I believe there will be a balance of about \$10,000 or \$15,000. The returns are not all in yet. We can not get them all in for some time.

Mr. KITCHIN. How do you get these things?

Admiral CONVERSE. From the naval paymaster. The clothing is manufactured at the factory in the New York Navy-Yard.

Mr. KITCHIN. The Navy buys the material and makes the clothing?

Admiral CONVERSE. Yes, sir; and the Paymaster-General of the Navy informed us verbally the other day that the increased cost of the outfit was due particularly to the increased cost of cotton and wool, and the cloth used in manufacturing, and not to the cost of manufacture.

Mr. KITCHIN. Do they buy the raw material by competitive bids?

Admiral CONVERSE. Yes; by competitive bids, and then have it

most severely tested. The great trouble in the Navy is to get colors that are fast. The action of salt water is very apparent on any goods that are not of the very best quality.

The CHAIRMAN. If we should not allow the 3,000 men this year could we not cut this down?

Admiral CONVERSE. You could cut off correspondingly on this.

The CHAIRMAN. How much can we cut off from this in that case?

Admiral CONVERSE. You can cut off about \$180,000.

The CHAIRMAN. It would be about \$60 for each man?

Admiral CONVERSE. Yes, sir; that is what I would estimate it.

The CHAIRMAN. That is \$60,000 for a thousand men?

Admiral CONVERSE. Yes.

Mr. LOUDENSLAGER. Would that be exactly correct? This is on first enlistment, is it not?

Admiral CONVERSE. Yes.

Mr. LOUDENSLAGER. It depends on how many reenlist, does it not?

Admiral CONVERSE. Yes.

Mr. LOUDENSLAGER. No; I mean on how many enlist?

Admiral CONVERSE. Yes; on how many enlist.

Mr. LOUDENSLAGER. You might have 10,000 desertions and 20,000 enlistments.

Admiral CONVERSE. It depends on how many we enlist.

Mr. LOUDENSLAGER. It does not depend on the force we authorize you to have, at all, does it?

Admiral CONVERSE. Yes, in a measure. The amount of money that will be required for outfits is based on expenditures for this purpose during previous years. The amount increases in proportion to the increased enlisted strength of the Navy.

Mr. KITCHIN. This is based on 12,000 enlistments?

Admiral CONVERSE. On 12,000 new enlistments.

Mr. LOUDENSLAGER. You had 3,000 reenlistments this year?

Admiral CONVERSE. Two thousand two hundred and eighteen.

The CHAIRMAN. The next is "Maintenance of naval auxiliaries," instead of "colliers."

Admiral CONVERSE. Yes.

The CHAIRMAN. Why do you make that change from "colliers" to "auxiliaries?"

Admiral CONVERSE. We wish to include with the colliers several vessels like the *Celtic* and the *Glacier*, provision vessels, ammunition ships, and a water ship.

Mr. LOUDENSLAGER. How many auxiliaries have you, altogether, of all kinds?

Admiral CONVERSE. We have 18, exclusive of the *Celtic* and *Glacier*, or 20 counting those two.

Mr. LOUDENSLAGER. How many of those are officered by civilians?

Admiral CONVERSE. Eighteen. Of these, 4 are now out of commission.

Mr. LOUDENSLAGER. Eighteen officered by civilians?

Admiral CONVERSE. Yes; with merchant captains, appointed to take command until discharged.

Mr. LOUDENSLAGER. The other two vessels are officered by men of the Navy?

Admiral CONVERSE. Yes.

Mr. LOUDENSLAGER. Are the other 2 about the same tonnage as the 18?

Admiral CONVERSE. Yes.

Mr. LOUDENSLAGER. What is the difference in cost to the Government for running those vessels, between those officered by the naval officers and those in which there are civil employees?

Admiral CONVERSE. That I can not get at right here.

Mr. LOUDENSLAGER. Will you kindly put that information in your hearing?

Admiral CONVERSE. Yes, sir. We will give you the cost of running the auxiliaries manned by civilians with data we have here now.

Mr. LOUDENSLAGER. Yes; but I want the pay of the officers who are on those vessels and all, so as to know the total difference of the cost of running those vessels as between the vessels run by civil employees and those run by men of the Navy. The civil officers in those auxiliaries have performed their duties well?

Admiral CONVERSE. Yes; very well, with one or two exceptions; and there is another advantage in having civilian officers and crews—when the vessel is laid up we discharge them.

Mr. LOUDENSLAGER. And another thing, it would give you more officers for your battle ships?

Admiral CONVERSE. Yes; by taking away the officers and crews who are now manning two of the auxiliaries. There is another point, when it got toward the end of the last fiscal year we put a number of the colliers out of commission immediately. That was done on account of the restriction which Congress passed forbidding deficiencies being created. We telegraphed to China to put three of the vessels out of commission, and we also telegraphed to Admiral Evans to put two of his vessels out of service on a certain date. He needed their services very much, but we told him he could have the colliers again after the 1st of July. We also laid up a water vessel, the *Arctusa*. We put those vessels out of commission and discharged their officers and crews and reduced expenses in every possible way we could, with the result that we show a little balance. We erred on the safe side. We had to do it. But I think perhaps the service suffered a little.

The CHAIRMAN. These vessels that you want to include in this item are in number three or four, are they not?

Admiral CONVERSE. About four or five.

The CHAIRMAN. What sort of vessels? What do you use them for?

Admiral CONVERSE. Provision ships.

The CHAIRMAN. Entirely?

Admiral CONVERSE. And water ships and an ammunition ship. For example, we have now in the harbor of Habana one of our two supply vessels, the *Celtic*.

The CHAIRMAN. Does that make the increase in this appropriation necessary—the inclusion of those vessels?

Admiral CONVERSE. It would make it necessary; yes, sir.

The CHAIRMAN. Do you reduce any other appropriation by taking these vessels out?

Admiral CONVERSE. No, sir; we get more men, however, for the battle ships. We would transfer the crew of the *Celtic* and the

crew of the *Glacier* and the crews of the ammunition vessels to the battle ships.

The CHAIRMAN. The next provision here is "Naval training station, California." You are asking for an increase of \$1,000?

Admiral CONVERSE. The amount asked for under maintenance is the same that was asked for and appropriated for the present fiscal year, excepting an increase of \$1,000 for "lectures and suitable entertainments for apprentice seamen," as has been appropriated for the training station at Newport for the last three years.

The CHAIRMAN. You ask for \$51,000.

Admiral CONVERSE. Yes. That has been provided for a number of years, and we think it is very desirable to do it in San Francisco.

The CHAIRMAN. Last year you had it, did you?

Admiral CONVERSE. For Newport.

The CHAIRMAN. Now you want it for San Francisco?

Admiral CONVERSE. Yes; for San Francisco.

Mr. KITCHIN. Was there any balance in this item last year—in this \$50,000?

Admiral CONVERSE. On the training station?

Mr. KITCHIN. For California.

Admiral CONVERSE. Practically none. The stations always use up their allotment within a few dollars. The books now show a balance of \$1,426.48. We do not know whether there are any further charges against that appropriation that have not been recorded. There probably will be more. There are nearly always some little charges which come in after the end of the fiscal year.

The CHAIRMAN. At Newport you are asking an increase of \$10,000.

Admiral CONVERSE. Yes.

The CHAIRMAN. Why is that necessary?

Admiral CONVERSE. Because of the increase of the number of men at the station, the new buildings which are now in the process of erection and which will require extra supervision and care, and increases in the amount of coal and water required. Water is a very costly article at Newport.

The CHAIRMAN. You have more men there now, have you?

Admiral CONVERSE. We have not at the present time, but at one time I think we had 1,600 or 1,800 men there. At the present time we have been transferring them to ships going out to sea.

Mr. KITCHIN. Was there any unexpended balance at this station?

Admiral CONVERSE. At Newport?

Mr. KITCHIN. Yes.

Admiral CONVERSE. The balance was \$1,820.02, reported on hand in the Treasury Department at the end of the fiscal year.

The CHAIRMAN. The next item is "Naval training station, Great Lakes." You are asking an increase of \$10,000. Why is that necessary?

Admiral CONVERSE. This increase of \$10,000 in the appropriation for maintenance is chiefly necessary to enable the commandant of the station to take the necessary measures to protect the lake front, which is being washed away. This will require filling and grading, and the employment of additional labor.

The CHAIRMAN. What is this new language, "pay of men on leave?"

Admiral CONVERSE. It has been inserted in the estimates to provide for the payment of salaries of men who are absent from the station on leave. Per diem employees have fifteen days a year.

The CHAIRMAN. Do you put that in at any other place? You do not at the Rhode Island station, do you?

Mr. CALLAHAN. The Naval Academy this year has put in the same provision in its estimates.

The CHAIRMAN. But you do not do it in the naval training station at Rhode Island or in California. Why should you not do it at all the stations? I do not know but it ought to be in at all places, navy-yards and stations. Why should you do it in one place and not in another?

Mr. CALLAHAN. At Newport and the other places there is not so much construction work going on, and much of what has been done has been carried on by outside contractors whose men are not entitled to these leave privileges.

Mr. KITCHIN. It looks like that new language in the section above would include that ravine and grading work, "repairs and improvements to grounds, buildings, and piers." Has there been no grading done there yet?

Admiral CONVERSE. Yes; they are at work there all the time. There was a contract let for grading a short time ago.

The CHAIRMAN. Would not that language above accomplish all that you want, "repairs and improvements to grounds, buildings, and piers?" I should think it would. Has there been any difficulty in the Comptroller's office?

Admiral CONVERSE. No, sir.

Mr. KITCHIN. What is the matter with the lake front there; is it washed away?

Admiral CONVERSE. Yes, sir; it is washing away.

The CHAIRMAN. The next is:

Naval training station, Port Royal, S. C.: Maintenance of naval training station, Port Royal, S. C., namely: Manual labor and material; general care, repairs, and improvements of grounds, buildings, and wharves; wagons, carts, implements, and tools, and repairs to same; gymnastic implements; models and other articles needed in instruction of apprentice seamen; stationery, books, periodicals, and other contingent expenses.

Admiral CONVERSE. We had an epidemic, quite an outbreak of meningitis, at the naval training station at Newport. We had perhaps nine or ten deaths. I speak from memory in regard to the numbers, but I think I am not overstating it. The result was that we had to stop sending recruits to Newport, and we sent them all to Norfolk, having there at one time in the receiving ships and on shore and in tents over 3,000 men. Conditions were so congested that it became almost necessary to stop recruiting entirely at the very season when we were getting the most recruits. The naval station at Port Royal is practically closed. Some very good buildings have been put up there, one for steam engineering, one for supplies and accounts, a storehouse, and yards and docks, I think, have one; and there is also a fairly good dock there. We are making arrangements so that in case of an epidemic of sickness of any kind either at Newport or at the St. Helena training station we can send one of our transports of the *Dixie* type down there, establish headquarters, tie the vessel up at the dock, and use the buildings for quarters for the men. The

reason for going there is that we have nearly everything that is required for the men, and the climate is so much better in the winter that we can keep them outdoors almost all the time.

The CHAIRMAN. Do you propose to establish a permanent naval station down there?

Admiral CONVERSE. No, sir; only to keep it in reserve.

The CHAIRMAN. You remember this question of Port Royal, perhaps before your time, was before Congress here, and we had a navy-yard down there, a small one, and Congress decided to close up Port Royal.

Admiral CONVERSE. Yes; it is practically closed now, we have caretakers there.

The CHAIRMAN. We have been trying to close it for a number of years under that understanding that it be closed, and we were to go to Charleston and build a navy-yard there.

Admiral CONVERSE. Yes.

The CHAIRMAN. But about every year there is some cropping out of Port Royal.

Admiral CONVERSE. The yard, all of the machinery, everything in connection therewith, has been moved from Port Royal to Charleston.

The CHAIRMAN. Yes.

Admiral CONVERSE. There is nothing now but this large tract of land, and nice buildings which are unoccupied, and all we wish to do is to occupy them. The Secretary of the Navy has turned it over to the Bureau of Navigation as a reserve for emergency camps for stop-overs from Newport to Norfolk. I can not imagine that it will ever become a permanent station on account of what you might call its isolation, the difficulty of getting there. When we had an epidemic of diphtheria on one of our large training ships we sent her to Port Royal, and she stayed there two months, putting the men under canvas or in tents, and fumigating and ventilating and disinfecting the ship.

The CHAIRMAN. The next is, "Naval depot, Saint Helena, Virginia."

Admiral CONVERSE. This money would be used principally for providing cooking arrangements and sleeping arrangements, urinals, and things of that kind. It was not the intention to make it into a station, except as an emergency or adjunct station to the others.

The CHAIRMAN. What is this depot of St. Helena, \$25,000? Is that a new proposition entirely?

Admiral CONVERSE. No, sir; St. Helena is a part of the navy-yard at Norfolk.

Mr. KITCHIN. That is an island down in the river?

Admiral CONVERSE. No; it is the mainland, directly across the river. There are the barracks used ordinarily at St. Helena [presenting photographs to the committee]. That shows the temporary nature of these improvements. The men are at present quartered in tents. Those are apprentice seamen that you see in that picture and petty officers. There is not a man there who has been in the service over four months. There is not a commissioned officer there. They are a pretty good set of men, I think.

A part of this \$25,000 is required in this way. A requisition was made on Saturday for boards to make floors for the tents, for \$300

for stoves to put in the tents, and for stovepipe, and we have no contingent fund on which to rely for little things of that kind.

Mr. KITCHIN. Is it the final purpose to let these men stay in tents all the year?

Admiral CONVERSE. No; it is the intention to take them away as fast as the ships are ready to receive them.

Mr. KITCHIN. I mean those who stay there; do they stay in tents?

Admiral CONVERSE. No; it is the intention to transfer them on board ships as soon as the ships are ready, and as soon as some necessary repairs are made to the temporary barracks the remainder will be quartered there.

The CHAIRMAN. Last year we made an appropriation of \$25,000 for repairs of buildings at St. Helena.

Admiral CONVERSE. Yes, sir. We have not completed those repairs now. They included changing the latrines, changing the cooking apparatus, and putting new roofing on the buildings which existed there, making them habitable. They are not habitable to-day, and will not be for two months.

The CHAIRMAN. This new provision means substantially a training station, does it not?

Admiral CONVERSE. That is what it has been used for for twenty years.

The CHAIRMAN. They call it a naval depot.

Admiral CONVERSE. That is the Secretary's name for it and not mine. It has been in use for a number of years, and last winter, in January and February, we had 3,600 men there, somewhere in the neighborhood of 2,000 of whom were under canvas. At that time we were assembling crews for two battle ships, and the rest of them were apprentice seamen.

The CHAIRMAN. For what purpose is this \$25,000?

Admiral CONVERSE. General repairs to buildings. This sum is asked for to assist in maintaining a station where more enlisted men assemble in a given time than at any other station.

At the present time when anything is needed for the health and comfort of the recruits in training at St. Helena a requisition is made upon the different bureaus, and often not approved; occasionally requisition is made upon the Secretary of the Navy for an allotment from the contingent fund, which likewise is often disapproved.

Last year the Secretary gave us \$4,000 to pay for tents which the Army transferred to us for this very use.

With the sum asked for it is intended to pay for the care and repairs of grounds and buildings on St. Helena, gymnastic implements and articles needed in instruction of apprentice seamen, books, periodicals, and other necessary contingent expenses that may arise.

The CHAIRMAN. The next is "Naval War College, Rhode Island." There is a change of language on page 21, where you have, instead of "purchase of books for reference," "for care and preservation of library, including the purchase, binding, and repair of books of reference, and periodicals, \$1,500." What is the matter with the way we had it before? What is the necessity for the change?

Admiral CONVERSE. The present appropriation for purchase of books of reference is \$400, and an increase of \$1,100 over the amount now allowed is asked for.

The phraseology is changed for the reason that it is believed that the above, which follows closely the phraseology of the appropriation for the library of the Naval Academy for the year 1907, better expresses the purposes to which the appropriation should be applied. The words "repair" and "binding" are inserted for the reason that it is believed in many instances the binding of periodicals and re-binding of books can be as well done by "open contract" with local binders as by the Public Printer, and with considerable saving to the Government aside from the freight to and from Washington. The former appropriation, \$400, which has been unchanged for a number of years, has proved to be entirely inadequate to meet the needs of the library, even with the closest kind of restriction on the character of the books purchased, with the result that the library is now far behind the needs of the college. In fact the \$400 hitherto appropriated annually is hardly sufficient to keep the library up to date in works on international law alone. When the limited circulation and consequent high price of the class of books required for the War College library is considered, it is believed that the amount named in this year's estimate is below rather than above the mark.

The CHAIRMAN. What about this librarian at \$1,600 instead of \$1,400 per year? How long has he been there?

Admiral CONVERSE. The recommended increase of \$200 in the compensation of the librarian is believed to be just and equitable. The present librarian has been employed at the college for about one year, and his work so far has been such as to merit the extra compensation. He must serve another year before the increase, if allowed, would go into effect, and as the salaries of trained librarians run, \$1,400 is not a large salary for an assistant librarian, and certainly not for a librarian in charge. In view of the above, and the increased value to the college of the librarian by reason of his two years' experience, the advance recommended does not seem unreasonable, particularly if the high cost of living in that vicinity be taken into consideration.

The CHAIRMAN. The next is—

Salaries, Naval War College, supplemental: One clerk of class two (in lieu of one clerk of class one, now paid out of appropriations "Pay, miscellaneous"), fourteen hundred dollars.

What about that?

Admiral CONVERSE. In a recent letter to the Bureau the president of the Naval War College points out the utter inadequacy of the clerical force now employed at the college and an estimate for two additional copyists has been submitted. With the close of the present conference the clerical force will be reduced to one clerk whose time is now and will be fully occupied with the current work of the president's office, and much of the work of the college will come to a standstill for the want of copyists. The number of officers attached to the college staff is not large enough to allow their diversion to this work, even if it were desirable to so employ them.

The president of the college views with apprehension the condition which confronts him, and earnestly urges a favorable consideration of the request contained in his letter above cited.

With a view to having the present clerk, now paid out of appropriation "Pay, miscellaneous," transferred to the civil establishment an estimate is submitted for one clerk at \$1,400 per annum, to be paid

from the appropriation for the support of the War College in lieu of one clerk at \$1,200 per annum, paid out of "Pay, miscellaneous." The additional salary is strongly recommended by the president of the War College, as all of the work of the War College falls on this employee; that is, attending to correspondence, preparing requisitions, keeping accounts, and so forth, which duties often require his working overtime.

Mr. KITCHIN. I notice there are also provided for two copyists at \$900 per annum.

Admiral CONVERSE. They are necessary in view of the increase in the clerical work at the college.

The CHAIRMAN. The next is "Naval Home, Philadelphia, Pennsylvania." That is a decrease of the total appropriation, but it is paid out of the pension fund, is it?

Admiral CONVERSE. Yes; out of the naval pension fund of \$14,000,000.

The CHAIRMAN. On page 23, for repairs to buildings, boilers, furnaces, and furniture, we have \$6,748. Last year you had \$8,000.

Admiral CONVERSE. Yes.

The CHAIRMAN. For "Support of beneficiaries" you ask less. What makes it less? That is about \$3,000 less.

Admiral CONVERSE. That estimate is based on the number of beneficiaries at the Home.

The CHAIRMAN. That is paid out of the pension fund?

Admiral CONVERSE. Out of interest on the pension fund of \$14,000,000. That fund has been in existence for a long time.

Mr. KITCHIN. The men contribute to this fund, do they not?

Admiral CONVERSE. No, sir. The sum of 20 cents per month is deducted from the pay of each officer, seaman, and marine in the Navy for maintenance of naval hospitals. This does not apply to beneficiaries at the Naval Home. The Naval Home was founded out of what we know as the naval pension fund. Forty years ago, when I first entered the service, they used to read, when they read the Articles of War, that all prize money paid should go to and remain forever for the support of people who had become disabled in the service. Afterwards, under the administration of Mr. Robeson or Mr. Chandler, this money was turned in, and we were only entitled to the interest on it. The fund amounted to about \$14,000,000.

The CHAIRMAN. I see here a provision for laborers and cooks, and so forth. You have separated it. There are a number of increases here.

Admiral CONVERSE. There is an increase in the pay of the stewards, the cooks, and two assistant cooks.

The CHAIRMAN. Are there any increases in the number of employees; any new employees asked for?

Admiral CONVERSE. Yes; a master mechanic at \$3.28 per day and a store laborer at \$480 per annum are asked for, in view of the increased labor at the Home.

The CHAIRMAN. Every year there is some increase in here. What is the present necessity for this? Are you not getting along all right as you are now?

Admiral CONVERSE. The master mechanic is required for the purpose of keeping up minor repairs to the buildings and the adjustment

of things that would naturally fall to pieces. He repairs furniture and performs other duties of that character. As for the increase in the pay of the cooks, and all the other, I take it to be simply that the wages of the people throughout the country in those occupations have been increasing.

The CHAIRMAN. What is this provision for pay of beneficiaries for extra duties performed by them at the Home?

Admiral CONVERSE. The regulations of the Naval Home provide that in consideration of the faithful performance of such duties in and about the Home as may be directed by the governor or commanding officer, each beneficiary shall receive \$2 per month. This was afterwards increased to \$3, and was paid up to March 1, 1906. Upon the question of the establishment of the rate of writer at the Home at a compensation of \$10 per month, the Comptroller of the Treasury rendered a decision, under date of March 22, 1906, to the effect that as the appropriation for the support of the Home provides specifically for 49 employees, other personal services than those authorized by the act are prohibited by section 3679 of the Revised Statutes. This was considered to also cover the cases of beneficiaries who had been receiving a compensation of \$3 per month for extra services performed, and consequently payment of this sum was stopped. To reimburse these beneficiaries for extra services rendered at the Home from March 1, 1906, to June 30, 1906, and also to pay certain workmen for services rendered to the Home during the second half of March, 1906, the present estimate is submitted.

The CHAIRMAN. Can you not pay these men here? Here, for instance, are a mechanic at \$4 per day, a carpenter at \$2.80 a day, a plasterer at \$2.80 a day, and so on.

Admiral CONVERSE. We could pay them up to the time that the Comptroller decided that they could not be paid out of the appropriation for the support of the Home. This caused so much suffering that some people contributed to give these poor old fellows the money that they had been receiving before.

The CHAIRMAN. We want you to state just the particular reason why it is necessary, and whether it is likely to occur again. Your total appropriation for the Home is about the same as last year?

Admiral CONVERSE. There is an increase of \$909.

The CHAIRMAN. That practically covers your Bureau, does it not, Admiral?

Admiral CONVERSE. I think it does, sir.

The CHAIRMAN. Over further, under public works, is all that is left, "Public works under Bureau of Navigation." You are asking for something there at the naval training station, California.

Admiral CONVERSE. Yes.

The CHAIRMAN. It reads:

Repairs to water service and an additional main: For extra service pipe to Oakland shore, and so forth, fifteen thousand dollars; to complete and repair roads, three thousand dollars. Painting of barracks, officers' quarters, three thousand dollars; dispensary building, thirty thousand dollars; in all, fifty-one thousand dollars.

Admiral CONVERSE. On account of the dependence of the station for its water supply upon a single line of 3-inch pipe connecting with the Southern Pacific water service at the end of the Oakland Mole,

it is necessary that an additional line of pipe be installed to the island directly from the aqueduct main on shore.

The CHAIRMAN. You have one pipe now?

Admiral CONVERSE. Yes; the station depends for its water supply on connecting with the Southern Pacific water service. All during the earthquake period it was considered necessary to keep a tug alongside of the training station and to keep the hose, and so forth, ready because of the danger of fire.

For the roads and grounds an estimate of \$3,000 is submitted—to reclaim land, for filling in, to continue road projected around the island, and to finish those already commenced with macadam and the necessary repairs.

The CHAIRMAN. How about this "Painting of barracks, officers' quarters, and buildings?"

Admiral CONVERSE. That is considered necessary work, and for painting the buildings it is estimated that the cost of labor and material will be \$3,000.

The CHAIRMAN. The last item is, "Dispensary building, \$30,000." Is not that a pretty expensive building?

Admiral CONVERSE. The quarters now provided for the care of the sick at the naval training station, San Francisco, Cal., are unsatisfactory as to location and are crude and inadequate in accommodations for the care and treatment of the sick.

The daily average number of sick on the station is twenty. This is more than doubled at times when the station has its full quota of recruits.

It is recommended that as soon as practicable a proper and sanitary structure be erected on the most convenient and suitable site available.

The noxious surroundings of the present sick quarters render aseptic surgery at this station impossible, and any other than this is malpractice. A safe site is therefore imperative, and must be one beyond the dusty regions that immediately environ the barracks.

The CHAIRMAN. How many men have you got there?

Admiral CONVERSE. We have at times 300 and over. It is my recollection that we send them over certain lines when recruited, to either the Pacific or the Atlantic coast, as the transportation cost may be least. My recollection is that the number was between three and four hundred the last time, but it varies greatly and is often large.

The CHAIRMAN. The next is, "Naval training station, Rhode Island: Buildings." What have you to say as to that? What is this "rebuilding old timber wharf and improving water front, nine thousand three hundred dollars?"

Admiral CONVERSE. The commandant of the naval training station at Newport reports that the present wharf has been in position a great many years. It was poorly built in the first place, and now, through the rotting away of timbers and the eating away of the piles by the teredo, it is in an unsafe condition. Temporary repairs will be attempted, but the wharf can not be put in first-class condition without entire rebuilding. It is extremely necessary to the station, as it is used by the three station tenders in the summer and winter, and affords a berth for the *Constellation* in the winter time.

The CHAIRMAN. They are using it right along?

Admiral CONVERSE. All the time.

The CHAIRMAN. What is this "Refrigerating plant, increase, seven thousand nine hundred and fifty dollars?"

Admiral CONVERSE. The present plant was installed when the station was small; even before the station doubled in size the plant was inadequate. It is now necessary to purchase at great expense large quantities of ice, involving long hauls from the city. The saving in cost of ice and certainty of supply and immediate service are an ample warrant for the increase in the plant. The present cold-storage rooms, instead of being supplied with ice, should be cooled with brine pipes, as only one-half the power required to manufacture ice is necessary. Also a large saving in space in the cold-storage boxes results, and the labor and expense of handling large quantities of ice is eliminated; the mere turning of a valve will supply the cold. It is to be noted that ice made for drinking purposes by the station plant will be pure, which can not be said of the ice purchased in the local market.

The CHAIRMAN. The next is "Artesian and fresh water system (to extend), three thousand five hundred dollars." What about that?

Admiral CONVERSE. New buildings about to be erected will require an extension of the artesian well and fresh-water systems. Many of the present fresh-water pipes are badly rusted and should be relaid to save waste.

Mr. KITCHIN. Do you know how deep they go there after water?

Admiral CONVERSE. I do not remember; no. I know that on a neighboring island, Goat Island, about three-quarters of a mile from there, we never succeeded in getting any good water at all. As a rule we use the water from the city supply. It is brought over in pipes, and we have to pay an exorbitant price for it. One man has had a monopoly of all the water works around that section of New England for a long time, and the water comes some distance.

The CHAIRMAN. The next is "Grading and walks at barracks C, six thousand two hundred dollars."

Admiral CONVERSE. This building has been occupied about one year. No walks have been provided in the vicinity. During wet weather the roads are extremely muddy and dirty. Cinders are tracked through the building and have helped to ruin the floors. It is essential that approaches to this building should be installed as promptly as possible.

The CHAIRMAN. The next is "General storehouse, forty-nine thousand five hundred and forty dollars."

Admiral CONVERSE. The present storehouse and pay office is so located that the apprentice seamen are required to take a round trip of about 1 mile in order to draw stores or pay.

The CHAIRMAN. That is good exercise, is it not?

Admiral CONVERSE. Except in bad weather.

Mr. KITCHIN. Is the building itself all right?

Admiral CONVERSE. It is in the wrong place. When this station was put up these people were confined to the ships right at the edge of the docks; but finally, when they built the barracks, they were carried north over the brow of the hill three quarters of a mile. Marching these men backward and forward to get their stores and their money and to get their clothing when they draw it at the end of the month is rather bad on their health, as they have to be kept standing outside waiting their turn. Newport is not a good place

for any outdoor work during a great part of the year. I mean that they have high winds there, and the place occupied by the Government is exposed.

The CHAIRMAN. The next is "Dredging channel and basin, ten thousand dollars."

Admiral CONVERSE. This has been twice requested. The entrance channel is narrow and irregular, making it very difficult to maneuver the station tenders and other boats. A number of accidents and collisions have occurred. Fortunately these have not been very serious so far. Furthermore, there is not now sufficient space for anchoring the boats possessed by the station. It is proposed, if the appropriation is granted, to widen the channel and deepen it to about 18 feet, and to dredge a basin varying from 8 feet to 18 feet in depth at the entrance. Ten thousand dollars is not sufficient to do the work which is considered necessary, but the request has not been any larger in the hope that the appropriation may be more readily granted and the essential parts of the work done.

The CHAIRMAN. The next is, "Steam distributing lines, six thousand three hundred dollars."

Admiral CONVERSE. The War College buildings and building No. 11 each have independent heating plants, requiring attendance throughout the winter, together with repairs and similar expenses. Furthermore, at the War College plant it is necessary to use anthracite coal at a cost of about \$5.25 per ton, because of cleanliness. These buildings are within reach of the central power house and should by all means be heated from there. The extra attendance during the winter will be avoided and a saving in the War College coal bill of about \$2.50 per ton, or about \$625 annually, will result. The total annual of saving will be well in excess of 10 per cent of the amount of the appropriation.

The CHAIRMAN. The next is, "New receiving and disinfecting building, thirty thousand dollars."

Admiral CONVERSE. An estimate of \$30,000 is submitted.

The present building is built of wood and is of a temporary character. It is of very insanitary construction, as has been reported by the Bureau of Medicine and Surgery. With the doubling in the number of the apprentices at the station it is not adequate. Furthermore, the new group of detention buildings is about to be erected on a different part of the island and the new building is necessary to complete the equipment. Not until this is done can the station be said to possess proper facilities for receiving and handling the new recruits in a safe and sanitary manner.

The CHAIRMAN. Have they got one now that they use?

Admiral CONVERSE. Yes; they have one there that they use, but it is not near the new detention buildings. One was destroyed by fire. The recruits are put in these buildings and thoroughly disinfected. Their clothes are disinfected, everything is taken away from them, and they are barbered and shaved and given new suits of clothes before they are sent anywhere else. I have always believed that the meningitis last year was brought in with the recruits from the cities from which they came.

The CHAIRMAN. Which do you think is the most important, the disinfecting building or that storehouse?

Admiral CONVERSE. One is to prevent disease in the outstart, and the other is to keep the men free of pneumonia after we have them in the service for a while. It is hard to tell which is most important.

The CHAIRMAN. The next is, "Increase of heating and lighting plant, five thousand three hundred dollars."

Admiral CONVERSE. Additional equipment is needed to put the plant on an economical basis. The old boiler feed pumps are badly worn. A feed-water heater, with storage capacity for returns from heating system, together with hot-water pump, should be installed, in order to save the heat in the exhaust steam and hot-water returns, as well as the water itself. The roof of the present engine room is too low and the ventilation is insufficient. As a result the heat is almost unbearable. Minor improvements in addition to those outlined are required. This estimate is regarded as one of the most important.

The CHAIRMAN. The next is, "Sanitary, heating, and ventilating system in barracks B, nine thousand eight hundred and forty dollars."

Admiral CONVERSE. The only satisfactory and safe heating and ventilating system from the point of view of health is one whereby heated fresh air is continually forced into the sleeping and living rooms. With a continuous supply of pure air, warmed as needed, it has been proven that sickness is very much reduced. Such systems are required by the laws of many of the States for certain classes of buildings. The present heating system in barracks B, while an attempt has been made to supply fresh air, is far from satisfactory. The fresh air, which is taken in from the openings in the walls, passes through galvanized iron boxes. These upon examination have been found to be filled with dirt and dust of all descriptions. There is no means of cleaning the boxes. The foul air is supposed to be removed through galvanized-iron ducts, current being actuated by a coil of pipe in the upper part of the stack.

This system, while an improvement over the method whereby absolutely no provisions are made for air supply, is far from sufficient and satisfactory. There is no means of controlling the amount of air supply; the action is not positive, and depends very largely upon the direction of the wind. Opening of windows and doors interferes with the operation. The expenditure of the small sum named is eminently justified, when it is considered that the health, and in some cases the lives, of many apprentice seamen are dependent thereon. This appropriation is specially urged in the line of improving the sanitary conditions at the station.

The CHAIRMAN. The next is, "Repairs and alterations to building numbered ten, seven thousand nine hundred dollars."

Admiral CONVERSE. This building is used as an administrative building and for quarters of the commandant of the station. The building is very old. The time of its erection is not known. A great many of the timbers in the floors and roof are in very bad condition. The heating system is in need of repairs. The electric wiring should be overhauled and ceilings reconstructed where the plaster is now loose. The entire basement story is in very bad condition and should be completely overhauled.

The CHAIRMAN. The next is, "Completion and repairs, three double sets of officers' quarters, four thousand two hundred and thirty-two dollars."

Admiral CONVERSE. The cellars of these cottages have been very damp. In several cases pools of water collect on the floors and the dampness and moisture arise through the houses. This condition is well known to be prejudicial to health. At various points the houses were not completed because the original appropriation was too small. The cellars are unfinished and there is at present no door to separate the cellars from the upper part of the houses. Minor items to complete the houses are also necessary.

The CHAIRMAN. The next is, "Furnishing assembly, lecture, and reading room, and improving basement story, two thousand nine hundred and ninety dollars."

Admiral CONVERSE. The appropriation for the building was barely sufficient to complete the rough walls and floor. A considerable rise in the cost of building materials and labor has taken place. The sum named is necessary to provide seats, window shades, plumbing, and other necessities. The comfortable seating capacity of the lecture hall is 754 persons. This may be increased to about 800. It is recommended that a gallery be constructed at the rear of the building, to increase the seating capacity by about 250. If this be done, about \$1,800 should be added to the above estimate.

The CHAIRMAN. This makes in all \$168,052 for these different items at Newport. The next is the "Naval training station, Great Lakes: Buildings." The first item is—

To complete buildings in accordance with the provisions of the act of Congress approved June twenty-ninth, nineteen hundred and six, to cost one million two hundred and fifty thousand dollars, seven hundred and fifty thousand dollars."

Do you need all of that this year?

Admiral CONVERSE. I believe Captain Ross thinks it is necessary. I would rather that he should appear here and speak for himself. All the information that I have is gathered from his statements to me and from blueprints and the present existing conditions. He is in the city, I think, or if not he can be gotten here very soon.

The CHAIRMAN. Very well. This concludes your Bureau.

Admiral CONVERSE. Yes, sir.

The CHAIRMAN. I wanted to ask you a question. I saw in your report that you spoke about the marines, and I would like to ask you about what you said.

Admiral CONVERSE. That is a question which I have considered. I would like to have that looked on not as a recommendation which I have made, but as a question which I have considered, as to the advisability of taking them out of ships. I gave my reasons for it. I see that it has started some controversy.

The CHAIRMAN. Yes.

Admiral CONVERSE. The character of the men in the Navy has changed entirely within the last twenty years. It has changed more rapidly in the last ten years than at any other period of the Navy. Formerly we recruited the Navy entirely from seacoast cities, and took into it people of all nationalities. Anybody who was a seafaring man would be taken in. They had no certificates of birth; they had no certificates of character; practically they had nothing. If they wanted to ship in the Navy, we took them. The result was they were rather an unruly set, and it was necessary to have over them, in

days gone by, a set of men who could enforce discipline, and for that purpose, I take it, the marines were sent on board ship.

At the present time we are recruiting our Navy entirely from American citizens. We are recruiting it from the interior of the country and teaching the men the duties of men-of-war's men on board ship. We call them sailors, but really they are battle ship's men. They are drawn from exactly the same class as are the marines and as are the soldiers. There is no reason, to my mind, why the enlisted force of the Navy should require a different class of men over them to keep them in order than the soldiers require a specially uniformed and paid class of men to keep them in order. They are differently paid, differently uniformed, and while they do some of the ship's duty they do not do all that blue jackets do. They are under different officers on board ship, officers not available for general duties. Many of the officers in the service have for years been of the opinion that the efficiency of the service would be increased if these men were withdrawn and an equal number of blue jackets put into their places. This matter has been forced upon me from my position as Chief of the Bureau during the last two and a half years, and I believe that the opinion of the majority of officers in command of our large ships is in favor of withdrawing the marines from the ships, utilizing them for guards at navy-yards and naval stations, and for expeditionary forces to be embarked in different ships of a transport nature and type. Within the past year the marines have been entirely withdrawn from our battle ships twice for short periods of time. Once they were placed in camp at Guantanamo for nine days.

The CHAIRMAN. How many marines are there to-day on the ships, approximately?

Admiral CONVERSE. About 8 to 10 per cent of the complement. Our battle ships carry the ordinary guards, which for a battle ship is 60 marines, and on the flagship it is increased to 72. In this connection I would like to read this paper:

U. S. FLAGSHIP MAINE,

Target Grounds, off Cape Cruz, Cuba, April 2, 1906.

SIR: 1. I respectfully submit for the information and consideration of the Department letters from each of the commanding officers of the twelve ships of the first squadron and Fourth Division relating to the manner and efficiency with which the police, orderly, and other duties usually performed by marines were performed by enlisted men of the Navy during the absence of the marines for a period of nine days while at Guantanamo Bay, Cuba.

2. During the stay of the fleet at Guantanamo Bay I directed that all the marines of the fleet, including the marine battalion of the U. S. S. *Yankee*, who was then present, encamp on shore for shore drills and the experience of camp life from the morning of March 8 to the morning of March 17.

3. Commanding officers were directed to detail enlisted men of the seaman branch to take the place of the marines while they were on shore and were directed to make report of the manner in which these men of the seaman branch performed their duties. A copy of my letter to commanding officers relating to this report is inclosed.

4. I beg to set forth the marine complement of the 12 vessels and in the opposite column the number of men in the seaman branch who performed their duties while they were on shore.

	Marine comple- ment.	Seaman branch detailed.
U. S. flagship Maine.....	73	43
U. S. S. Missouri	69	20
U. S. S. Kentucky.....	60	30
U. S. S. Kearsarge.....	60	30
U. S. flagship Alabama	66	43
U. S. S. Illinois.....	60	21
U. S. S. Iowa.....	60	26
U. S. S. Indiana.....	60	21
U. S. flagship West Virginia.....	60	22
U. S. S. Colorado.....	60	11
U. S. S. Pennsylvania.....	60	13
U. S. S. Maryland.....	60	20
Total.....	748	300
Average.....	62	25

5. It will be seen from the above table that the number of enlisted men to perform the duties of sixty or more marines varied from 11 to 43, the two high numbers of 43 being flagships.

6. It will appear from the accompanying reports of commanding officers that the men generally were not specially selected for this duty and that of the 300 men performing the duties for nine days there was but one case of dereliction; also on some of the ships the men were not excused from doing much of their general ship's work.

7. I would add also that no extra officers were required to replace the absent marine officers and that no officer was burdened with additional duties during their absence, unless it were the executive officer, who had, of course, to arrange and supervise the necessary details.

8. The way in which these men of the seaman branch took hold of and performed duties to which they were unused and unfamiliar appears to me to be highly commendable, and I accordingly bring it to the Department's notice.

9. I would add that at Guantanamo Bay, Cuba, there was a considerable number of instances of "drunkenness on board" or among sailing parties and that there have been some attempts to smuggle liquor on board, so that it was not a case where the police duties of the ship were nominal.

Very respectfully,

R. D. EVANS,

Rear-Admiral, U. S. Navy.

Commander in Chief United States Atlantic Fleet.

The SECRETARY OF THE NAVY,

Navy Department, Washington, D. C.

The CHAIRMAN. What other navies have marines on board ship?

Admiral CONVERSE. England only.

The CHAIRMAN. Do they have marines in any other navies?

Admiral CONVERSE. I think not. That is my recollection, and I think they are gradually assimilating them in the English navy, as I recollect, with their blue jackets.

The CHAIRMAN. They are making them all into blue jackets?

Admiral CONVERSE. They are doing away with the distinction between the two on the ship. They used to have marine artillerymen and marine infantrymen. I think they are wiping out the distinctions and having the marines do the duty of blue jackets.

The CHAIRMAN. Are there any other matters in your report that you would like to speak of?

Admiral CONVERSE. No, sir; I do not think of any other. It is not generally known or realized that when the vessels were sent to Cuba this fall the two vessels that arrived in Cuba first had no marines on board, and the landing parties which were sent ashore in Habana and Cienfuegos were composed of blue jackets entirely. They handled the situation until the marines arrived later and did valuable

service in guarding sugar estates and other American property. The ship at Cienfuegos landed about 100 of its crew, and their duties on shore were performed splendidly. The commanding officer of that ship does not wish to have any marines sent to his ship. The battle ship *Massachusetts* for a year or a year and a half while she was in the battle-ship squadron had no marines on board. The blue jackets do not like to feel that they are distrusted and that marines are kept over them.

The CHAIRMAN. Is not the whole question as to whether you shall have marines on board all the time a matter of regulation in the Department?

Admiral CONVERSE. Yes, sir.

The CHAIRMAN. There is no law provided concerning it?

Admiral CONVERSE. No, sir; except general law—the Revised Statutes, sections 1611, 1616, 1617, 1618, 1619, 1620, and 1621. The first of the revised statutes mentioned provides that the President of the United States may divide the marines up into companies and detachments, and so forth, as he may see fit.

Section 1616 provides that he may detach marines for duty on board ship whenever in his judgment it is desirable to do so. He may also detach and appoint officers of the Marine Corps for service on board ship.

One important section (1621) provides that the Marine Corps shall be subject to the laws and regulations of the Navy, except when the marines are detached for service with the Army by order of the President. Then they come under army regulations.

Another proviso is that the President may detail marines, whenever he sees proper, to perform the duty of landsmen on board ship.

Another provides that he can garrison any of the seacoast defenses or ports with marines whenever he wishes and assign them to any duty on shore.

The CHAIRMAN. But still it is within the regulation of the Department?

Admiral CONVERSE. Quite within the regulation of the Department. All of the marines were withdrawn and sent to Cuba. During that entire time the battle-ship squadron was without marines again for something like three weeks, I should imagine; and Admiral Evans again reports, under date of November 18, 1906, in regard to them:

These men acted as orderlies, sentries, corporals of the guard, etc., and without an exception performed their duty to the satisfaction of the commanding officers of the ships. The men were orderly, intelligent, and zealous, as a rule.

2. The marine guards of the ships of the first squadron, exclusive of the flag-ship, number at least 60 men. Their duty was performed by the bluejackets, averaging about 36 per battle ship, and varying from 31 to 42. I have always been of the opinion that a ship's company of bluejackets alone would be of great advantage to the ship, and my opinion is confirmed after seeing the manner in which the duty has been performed by these men in the absence of the marine guards.

3. The present guards are larger than are needed on board ship to perform the ship's duty, and I have to recommend that they be reduced to one commissioned officer and 36 noncommissioned officers and privates, and that the difference between this number and the present guards be made up by an increase of the complement of bluejackets.

I have here letters from all the commanding officers of the battle ships. While they do not any of them state explicitly that they would like to have the marines withdrawn, they all state that the

duty during the absence of the marines was performed equally well, if not better, by the bluejackets.

(At 1 o'clock p. m., the committee adjourned until to-morrow, Tuesday, December 11, 1906, at 10.30 o'clock a. m.)

NAVY DEPARTMENT,
Washington, December 11, 1906.

SIR: The Department has the honor to transmit below, for the information of the Committee on Naval Affairs, certain data which was requested by the chairman and members upon the occasion of the appearance of the Chief of the Bureau of Navigation before the committee on the 10th instant, in connection with the estimates of appropriations for the fiscal year ending June 30, 1908.

MEN UNDER TRAINING AT TRAINING STATIONS.

The following table is submitted, from which it is believed an idea may be formed of the constantly changing number of men at the three training stations:

	June, 1905.	Septem- ber, 1905.	Decem- ber, 1905.	March, 1906.	June, 1906.	Septem- ber, 1906.
Newport, R. I.	1,191	1,134	989	1,364	1,519	1,109
St. Helena, Va.	734	682	854	766	609	393
San Francisco	59	179	284	529	272	184

COMPARATIVE COST OF MAINTAINING NAVAL AUXILIARIES WITH NAVAL AND WITH
MERCHANT CREWS.

Referring to the inquiry made as to the cost of maintaining in commission an auxiliary vessel with a naval crew as compared with a merchant complement, the Department has the honor to state that the sum required to officer and man an auxiliary vessel with a naval crew greatly exceeds the sum which would be required to pay and subsist a merchant crew. The yearly cost of pay and subsistence of a naval crew on the U. S. S. *Cesar*, for example, would be \$41,246, while with a merchant crew the sum required for the same purpose would be but \$29,607. The pay and subsistence of officers and men of the supply ship *Celtic*, which is manned by a naval crew, amounts yearly to \$67,169, while that of officers and men of the collier *Ajar*, a vessel of about the same size as the *Celtic*, carrying a merchant complement, would amount to only \$31,467.

The cost of manning the U. S. S. *Glacier* with a naval crew for one year amounts to \$75,539, while with a merchant crew it could be done for \$31,467. The above figures are approximate and are based on full complements of the vessels mentioned.

UNITED STATES NAVAL HOME.

As the committee was advised at the hearing above referred to, the regulations of the Naval Home provide that in consideration of the faithful performance of such duties in and about the Home as may be directed by the governor or commanding officer, each beneficiary shall receive \$2 per month. This was afterwards increased to \$3, and was paid up to March 1, 1906. Upon the question of the establishment of the rate of writer at the Home, at a compensation of \$10 per month, the Comptroller of the Treasury rendered a decision, under date of March 22, 1906, to the effect that as the appropriation for the support of the Home provides specifically for 49 employees, other personal services than those authorized by the act are prohibited by section 3679 of the Revised Statutes. This was considered to also cover the cases of beneficiaries who had been receiving a compensation of \$3 per month for extra services performed, and consequently payment of this sum was stopped. No compensation has been received by the beneficiaries for services rendered from March 1, 1906, to June

30, 1906, and payment of workmen employed by the governor during the latter part of March has also been withheld, in conformity with the decision of the Comptroller above referred to.

An estimate for \$1,205.66 has accordingly been submitted to pay the beneficiaries for extra duties performed by them during the above-mentioned period, and an estimate of \$56 has been submitted for the purpose of paying a mechanic and carpenter employed by the governor of the Home during the latter part of March.

The naval appropriation act approved June 29, 1906, authorizes the Secretary of the Navy to employ, on the recommendation of the governor, beneficiaries in the Naval Home, whose compensation shall be fixed by the Secretary and paid from the appropriation for the support of the Home.

The committee is informed that the expense of maintaining the Home is paid out of the interest on the "naval pension fund," which accrues from total Government receipts from sales of prizes and from suits for depredations of timber belonging to the United States. This fund amounts to \$14,000,000, and the annual interest, at 3 per cent, is turned over to the Secretary of the Navy. The amount of this interest, viz, about \$420,000, is deposited with the Secretary of the Interior toward the payment of naval pensions, with the exception of the sum which is necessary for the support of the Home. Any balances remaining from the appropriation for the support of the Home, instead of being turned back into the surplus fund of the Treasury, are credited to the interest on the naval pension fund.

CERTIFICATE OF AGE UPON APPLICATION FOR ENLISTMENT.

The question was asked the Chief of the Bureau of Navigation whether an applicant presenting himself at an army recruiting station would be required to submit the same evidence as to his age as the law directs shall be done in the Navy. The Department considers, however, that this information might be more properly furnished by the War Department, and suggests that the committee address such inquiry as it may desire to make upon this subject to the Secretary of War.

Very Respectfully,

CHARLES J. BONAPARTE,
Secretary.

The CHAIRMAN COMMITTEE ON NAVAL AFFAIRS,
House of Representatives, Washington, D. C.

[No. 2.]

BUREAU OF ORDNANCE—STATEMENT OF REAR-ADMIRAL N. E. MASON, CHIEF OF THE BUREAU OF ORDNANCE, NAVY DEPARTMENT.

COMMITTEE ON NAVAL AFFAIRS,
HOUSE OF REPRESENTATIVES,
Wednesday, December 12, 1906.

The committee met at 10.30 o'clock a. m., Hon. George E. Foss (chairman) in the chair.

The CHAIRMAN. We begin on page 26 of the bill:

Bureau of Ordnance. Ordnance and stores: For procuring, producing, preserving, and handling ordnance material; for the armament of ships; for fuel, material, and labor to be used in the general work of the Ordnance Department, etc.

Last year the appropriation was \$3,500,000, and this year you ask for \$4,146,457. How do you make that out?

Admiral MASON. The following is a detailed statement concerning this estimate:

Detailed explanation of the necessity for the appropriation "Ordnance and ordnance stores" for the fiscal year 1907-8, amounting to \$4,146,457.

Ordnance and ordnance stores, \$4,146,457, itemized as follows:

First general clause—

(a) For procuring, producing, preserving and handling ordnance material. (NOTE: This item is embraced in (b) and (c), being simply part of the definition of the use of the appropriation.	
(b) For the armament of ships-----	\$142,580
(c) For fuel, material, and labor to be used in the general work of the Ordnance Department, exclusive of watchmen and maintenance of the naval proving ground and powder factory-----	2,251,513
(d) For watchmen at magazines, powder factories, and powder depots -----	34,500
(e) For furniture in ordnance buildings at navy-yards and stations_	1,125
(f) For maintenance of proving ground and powder factory-----	65,681
(g) For target practice -----	1,651,058
	<hr/>
	4,146,457

This appropriation has been itemized, as directed by the Department in its circular letter of September 7, 1906.

It is pointed out that the estimated amount set opposite each item as a possible expenditure is only approximate and liable to be increased or diminished by unforeseen contingencies, and also that the aggregate amount appropriated for several purposes may be, in fact, differently distributed among them. For instance, the expressions "for procuring, producing, preserving, and handling ordnance material," "for the armament of ships," "for fuel, material, and labor to be used in the general work of the Ordnance Department," "for maintenance of the proving ground and powder factory," and "for target practice" have practically the same meaning, labor and material being used for all in an increased or diminished amount as occasion may demand.

The appropriations under this head for the past six years have been as follows :

1901-2 -----	\$500, 000
Deficiency -----	300, 000
Total -----	800, 000
1902-3 -----	800, 000
Deficiency -----	500, 000
Total -----	1, 300, 000
1903-4 -----	1, 500, 000
1904-5 -----	2, 000,000
Deficiency -----	500, 000
Total -----	2, 500, 000
1905-6 -----	3, 000, 000
1906-7 -----	3, 500, 000

The Bureau has increased its estimates under this head by \$646,457, making a total of \$4,146,457, as above stated.

The CHAIRMAN. Why is that?

Admiral MASON. The Bureau has done this under the assumption that there will be in full or partial commission during the fiscal year 1908 24 battle ships, 12 first-class cruisers, 66 second and third rate vessels, 60 torpedo vessels, and 15 auxiliaries, making a total of 177 vessels.

This represents an increase of 38 vessels over the present fiscal year, 5 of which are battle ships, 2 first-class cruisers, 9 second and third rate vessels, and 22 torpedo vessels. Four hundred and fifty-one thousand and fifty-three dollars of this estimate is for an increase of target-practice appropriation over last year, as it is absolutely necessary to provide for the additional vessels above mentioned. The increase over that previously asked is due to the increase in the number and size of vessels which will be engaged in target practice.

It was put in this working appropriation—about \$1,400,000.

The CHAIRMAN. This will give you about a million and a half for target practice?

Admiral MASON. Yes, sir. We are going to have a good many more battle ships, and their target practice would cost more. "Ordnance and ordnance stores" is a general appropriation for carrying on all the work of the Ordnance Department of any kind, except that for vessels under construction or for purposes otherwise especially appropriated for. It includes work at navy-yards, magazines, and the naval proving ground; all material and labor necessary for the care and preservation of ordnance stores on shore and afloat; furniture in the ordnance buildings at navy-yards, and in magazines and stations; labor, watchmen, fuel, tools, and a great variety of miscellaneous items not otherwise provided for.

The expenses under this working appropriation of the Bureau necessarily increase with every ship added to the Navy, and the amount asked for is believed to be the minimum consistent with efficiency and safety.

The CHAIRMAN. Will you have an unexpended balance in this this year, do you think?

Admiral MASON. I am sure not, without our system of accounts allows some money turned into the Treasury that we can not help. On our last appropriation, although we worked as carefully as we

could and supposed that we had expended the whole appropriation, there was, or will be, a sum of about \$175,000, probably, turned in which we needed very much for a great many modifications and changes; but it was simply because of the transfer of accounts, because of our not knowing how our accounts stood, not keeping the books ourselves.

Mr. ROBERTS. How does it happen that this money gets turned into the Treasury?

Admiral MASON. Transfers were made. We did not expend it. We held up necessary work which we should have used the money for, simply because we did not think we had it.

Mr. ROBERTS. Not having a set of books in your own department, you could not tell how you stood with regard to the amount available?

Admiral MASON. Yes; and not being informed by the accounting bureau until several months later, we did not spend the money; we did not obligate the money.

Mr. ROBERTS. You did not spend the money that you should have spent and really needed?

Admiral MASON. And at the end of the fiscal year we could not do anything.

Mr. ROBERTS. Had you known how you stood, you could have used that \$175,000?

Admiral MASON. Yes; we could have used it in modifying and modernizing the work.

The situation in regard to expenditures is this: Material, under the cognizance of the Bureau of Ordnance, is bought under several appropriations. "Increase of the Navy, armor and armament," "Reserve guns for auxiliary cruisers," "Reserve guns for ships of the Navy," and out of the annual appropriation "Ordnance and ordnance stores." When material bought under these several appropriations is required for use other than that to which the Accounting Bureau considers strictly chargeable to the appropriation under which the material is bought a transfer of funds is involved, of which the Bureau of Ordnance may have no accurate knowledge until some time after the transaction is closed. These transactions sometimes amount to considerable sums, in excess of \$150,000 for a single month, or even a single transaction, and as a result it has been practically impossible for the Bureau to be sure that its balances near the end of a fiscal year are on the safe side. Formerly this uncertainty was not of such serious importance as it has been since the passage of the deficiency act of March 3, 1905, with its stringent provisions on the subject of deficiencies, inasmuch as prior to the passage of this act the Bureau, while making every effort to keep within its appropriations, could, if a deficiency were unwittingly or necessarily incurred, make to Congress a satisfactory explanation accompanying a deficiency bill. Since the passage of this act this Bureau, with the cooperation of the Accounting Bureau of the Department, has taken several steps looking to prompt and more accurate statements of actual balances, but even with such measures as have been taken or suggested, short of such prohibitive ones as might seriously interrupt necessary work, or even keep from ships in commission imperatively needed material, there is no certainty that the Bureau can authorize obligations to a closer limit of the appropriation "Ordnance and ordnance stores" than \$100,000 without risking an infraction of the

law contained in the act referred to. The appropriation "Ordnance and ordnance stores" is mentioned specifically because it is the one chiefly involved, the other appropriations under which material is purchased not being annual.

The CHAIRMAN. I see the proviso is stricken out of last year.

Admiral MASON. What is that?

The CHAIRMAN. The proviso—

That no part of this appropriation shall be expended for the purchase of shells or projectiles except for shells or projectiles purchased in accordance with the terms and conditions of proposals submitted by the Secretary of the Navy to all of the manufacturers of shells and projectiles, and upon bids received in accordance with the terms and requirements of such proposals. All shells and projectiles shall conform to the standards prescribed by the Secretary of the Navy.

Is there any objection to keeping that in?

Admiral MASON. No more than the original objection that we had to going into competition for armor-piercing shells.

The CHAIRMAN. What has been the effect of it?

Admiral MASON. The effect has been to place the contracts all in the hands of one company.

The CHAIRMAN. To place the contracts all in the hands of one company?

Admiral MASON. Yes; their bid was decidedly lower than anybody else's, and in all probability the bids which are to be opened in four or five days will also be lower.

The CHAIRMAN. So that heretofore you divided up the work, did you—distributed it?

Admiral MASON. Distributed, not divided; because the Department gave the bulk of the work to the firm that they knew could furnish the required articles in compliance with the specifications. In addition, small orders were given to other large firms, who expressly desired to develop this particular kind of ordnance material, and they were given a chance to do so.

The CHAIRMAN. What is going to be the effect of this? Is it going to be to drive the other fellows out of business, so far as the Government bidding is concerned?

Admiral MASON. I am afraid so; without some of the large steel companies, by quite a large expenditure of money, acquire or develop a process of their own, by which they can comply with the Department's high specifications for armor-piercing projectiles. This they have endeavored to do in the past, without much success.

The CHAIRMAN. What is the company that got the contracts for this?

Admiral MASON. The Firth-Sterling Steel Company.

The CHAIRMAN. They have got a monopoly of the business?

Mr. KITCHIN. Where is that located?

Admiral MASON. In Pittsburg, Pa., and they are building quite an extensive establishment across the river here, at Giesboro Point.

The CHAIRMAN. What was the difference between their bid and that of other companies on the work? State generally the percentage.

Admiral MASON. Approximately 40 per cent. The total bids were as follows: Firth-Sterling Steel Company, \$322,500; Bethlehem Steel Company, \$541,850; and the Midvale Steel Company, \$554,900.

I will say that the Firth-Sterling Steel Company in their bids this time bid exactly the same prices as the prices they have been charging us for the past three or four years. They made no change in their prices, although there was competition, and I considered their prices, from what I know of the manufacture, as fair and reasonable.

Mr. ROBERTS. Then that provision of the law last year has not cheapened the cost of the projectiles to the Government.

Admiral MASON. No.

Mr. KITCHIN. It has cheapened, too.

Mr. ROBERTS. No; it has not cheapened it. They were about 40 per cent under their competitors.

Admiral MASON. The idea being that these competitors could not afford to start in, taking a jump in the dark, and bid a low price. They had to put in a price that would cover their plants and their experimental work.

Mr. KITCHIN. But the result of this provision is that upon a great deal of your material you get it 10 or 15 per cent cheaper than you did before?

Mr. ROBERTS. You say that before you had been distributing the contracts for armor-piercing projectiles?

Admiral MASON. Yes; in a manner. In 1903 to induce competition the Bureau gave orders for armor-piercing shell to four of the principal steel companies, with the idea of enabling them to develop their facilities for the manufacture of this class of projectile. The results were not very satisfactory. Since that date until this advertising was made mandatory the Bureau has endeavored to distribute its orders for target and common shell among these companies in such manner as would best tend to keep their projectile plants in an efficient condition. As a result of advertising, however, the Firth-Sterling Steel Company are now manufacturing practically all the shell of large calibers, target as well as armor-piercing, on outstanding Bureau contracts. This is, of course, because they underbid their competitors.

Mr. ROBERTS. So that these competitors of the Firth-Sterling Company did last year put in their bids at practically the same prices at which you had been awarding them small contracts heretofore?

Admiral MASON. No; they were rather higher, probably because in view of their past experience these companies realized the difficulty of complying with the service requirements for this class of shell.

Mr. ROBERTS. They did not get into a competition with the Firth-Sterling people, really?

Admiral MASON. There was a competition, because it was advertised and everybody had a chance to bid.

Mr. ROBERTS. I understand there was a technical competition, but no real competition. The Firth-Sterling people put in the same bids as always, and the other people bid considerably higher?

Admiral MASON. Yes.

Mr. KITCHIN. About how many bidders were there this time?

Admiral MASON. The Firth-Sterling Steel Company, the Bethlehem Steel Company, and the Midvale Steel Company.

Mr. KITCHIN. Did you have any reason to think that there was any understanding between these bidders?

Admiral MASON. Not a bit. We have new advertisements out, and I have been asked for information by different firms concerning the

advertisements. I do not think there is any combination between them at all.

Mr. ROBERTS. Let me ask you this: A few years ago there was some concern located in Lynn who were making small projectiles for the Navy——

Admiral MASON. The American Ordnance Company, now consolidated with the American and British Manufacturing Company.

Mr. ROBERTS. Are they in competition at all, or doing any business?

Admiral MASON. Yes; they bid on minor-caliber projectiles and on some of the smaller target shell.

Mr. ROBERTS. They do not make the larger ones?

Admiral MASON. No; they do not make larger armor-piercing projectiles. We always have had competition for everything except armor-piercing projectiles ever since I have been in the Bureau—for target shell and common shell there was always competition. We did not advertise, but our custom was to write to the different firms and inform them that on a certain day we would open letters bidding on certain projectiles. Of course, now we advertise for everything. We got competition for target shells. All we want is to have the target shell strong enough to get out of the gun and get to the target without breaking up. An armor-piercing shell is an entirely different thing. It is something that not many people can make.

The CHAIRMAN. Would you recommend that we restore this proviso as to advertising for shell this year or not?

Admiral MASON. For policy I would prefer to leave it out. I will say that I have not the least idea who scratched it out. (See Appendix A for tabulated lists of contracts and prices of armor-piercing shell, 1903–1906, inclusive.)

The CHAIRMAN. The next is——

Ammunition and other supplies for new ships (heretofore included in appropriation "Armor and armament"), seven hundred and fifty thousand dollars.

That was included before in "Armor and armament?"

Admiral MASON. Yes. The following is a statement concerning this estimate:

Ammunition and other supplies for new ships, heretofore included in appropriation "Increase of the Navy, armor and armament."

Amount asked for, \$750,000.

It is most strongly urged that ammunition and other supplies for new vessels be appropriated for under the title "Ordnance and ordnance stores," for the following reasons:

First. In consequence of an exhaustive consideration of the subject by the Board on Construction, in conference with the Paymaster-General and the Judge-Advocate-General of the Navy, it has been decided that under existing law the appropriations under the various Bureaus under the general title "Increase of the Navy," should be construed as covering expenses for only such items of equipage as are defined by the Navy Regulations as coming under title "B."

This decision has been approved by the Secretary of the Navy, and tends to exclude the ammunition and other supplies asked for from the title "Armor and armament."

Second. Under existing conditions, with ammunition and ordnance supplies carried under the two titles "Armor and armament" and "Ordnance and ordnance stores," this Bureau, being by regulation forbidden to keep accounts, is absolutely unable to keep a businesslike control and cognizance of this material under the separate titles. When the ammunition and supplies under both titles

are issued to the naval magazines, the Bureau practically loses knowledge of the title under which the material is carried.

Great care has been and is taken by the Bureau to insure that in the purchase of these materials the proper separation of titles is observed, but, this done, the Bureau is practically powerless to further scrutinize the titles.

This lack of knowledge, as regards titles, is shared by the officials in charge of naval magazines.

The result is that the ammunition and, to a lesser degree, supplies are frequently issued under a title other than their proper one. This results in a transfer against the appropriation to which they are issued in favor of the one under which they are purchased. Knowledge of this transfer is not received by the Bureau from the accounting Bureau until a considerable time afterwards. The result of this is that the Bureau experiences great difficulty in preventing the deficiencies under certain appropriations which may result from such transfers.

A case in point is as follows:

In July, 1906, material, probably ammunition, was issued from the navy-yard, Mare Island, for other than new vessels. This material was carried under "Armor and armament." The result was a transfer of \$106,000 against the appropriation "Ordnance and ordnance stores." This transfer was not reported to this Bureau until the November statement received from the Bureau of Supplies and Accounts. In the meantime the monthly statements received from that Bureau showed a satisfactory balance under that appropriation, and indicated that, in that portion of the appropriation allotted to the month of July, there was an unexpended balance of about \$112,000. Acting on this information the Bureau felt justified in expending this balance.

It is very possible that the knowledge of similar transfers may not be received by the Bureau until after the end of the fiscal year, which would result in a deficiency forbidden by law, and which the Bureau would be powerless to prevent.

Appropriation for ammunition and supplies for new vessels under "Ordnance and ordnance stores," as is recommended, would place all these materials under one title and would prevent such transfers and the resulting embarrassment to the Bureau.

The above amount (\$750,000) has been deducted from the estimates under "Increase of the Navy, armor and armament."

NOTE(a).—Incident to the appropriation "Ammunition and other supplies for new ships" under appropriation "Ordnance and ordnance stores," it is requested that a clause be inserted providing that ammunition and other supplies already on hand or contracted for under appropriation "Armor and armament" shall be thereby transferred to appropriation "Ordnance and ordnance stores," the same as if purchased under that appropriation. Unless this is done an appropriation of \$2,000,000 will be required under "Ordnance and ordnance stores" to cover transfers of ammunition now on hand or contracted for and carried under "Armor and armament," which will be issued to new vessels after July 1, 1907. (See note under appropriation "Increase of the Navy, armor and armament.")

NOTE(b).—Should Congress fail to appropriate the above sum under "Ordnance and ordnance stores," it should be again included under "Increase of the Navy, armor and armament."

The CHAIRMAN. Have you cut down the estimate for armor and armament that much?

Admiral MASON. Yes. That is mentioned in the statement above.

Mr. KITCHIN. Before you leave that, at page 27 the appropriation under the main item was recommended this year to be \$4,146,000, and the reason of the great increase is because there are now more ships than heretofore?

Admiral MASON. Yes.

Mr. KITCHIN. Could you give us an approximate idea of what that would be if we had our present Navy completed, with all the ships authorized?

Admiral MASON. Under this heading the Bureau estimates that by the time the present construction is finished it will be increased to

\$5,197,000. This takes in all vessels down to and including the *New Hampshire*, *South Carolina*, and *Michigan*, and is what it is now estimated the appropriation "Ordnance and ordnance stores" will amount to.

Mr. KITCHIN. The amount of the annual cost after the ships are completed is a matter that is desired to be known as accurately as possible now, I think.

Admiral MASON. I have given that.

The CHAIRMAN. You can put that statement in?

Admiral MASON. Yes, sir. It does not affect the situation except in this: This \$750,000 is what we want appropriated this year for ammunition for new ships. I think the committee understand that it is not considered advisable to charge to the building of ships such stores as are expendable or perishable.

The CHAIRMAN. It is a matter of bookkeeping?

Admiral MASON. Yes. In addition to that, a clause will have to be put in this part of the bill, or under "Armor and armament," saying that the two millions of ammunition—that is, the powder, and so forth, that we already have purchased under armor and armament—should be transferred to ordnance and ordnance stores without a charge against that appropriation. That is, we have been purchasing the ammunition for these new ships. The note in the statement explains it.

Mr. ROBERTS. If this \$750,000 on page 27 is not allowed, you want an increase in armor and armament by that amount?

Admiral MASON. Yes. Incident to the appropriation "Ammunition and other supplies for new ships," under appropriation "Ordnance and ordnance stores," it is requested that a clause be inserted providing that ammunition and other supplies already on hand or contracted for under appropriation "Armor and armament" shall be thereby transferred to appropriation "Ordnance and ordnance stores," the same as if purchased under that appropriation. Unless this is done, an additional appropriation of \$2,000,000 will be required under "Ordnance and ordnance stores" to cover transfers of ammunition now on hand or contracted for.

The CHAIRMAN. With that exception you will get along just as you have in the past?

Admiral MASON. Yes; but we will not be bothered by transfers from one appropriation to another.

The CHAIRMAN. The next is "Purchase and manufacture of smokeless powder," \$500,000. That is the same as last year?

Admiral MASON. Yes, sir; the same as last year.

The CHAIRMAN. Can we not get that down, or have we got to have that every year?

Admiral MASON. It is the same thing every year. It has been so except the year of the Spanish war, and then it was \$1,000,000.

The CHAIRMAN. How much do you purchase and how much do you manufacture out of that?

Admiral MASON. We use it almost all up in the manufacture of powder at the Government plant at Indian Head. It practically keeps our powder factory running.

Mr. BUTLER. Where does the appropriation come from for smokeless powder?

Admiral MASON. Part of it out of the appropriation "Armor and

armament," and the remainder out of the various items under "Ordnance and ordnance stores."

Mr. KITCHIN. Outside of the smokeless powder secured under this appropriation, about how much do you spend for smokeless powder, if any?

Admiral MASON. Outside of this item of \$500,000 we have asked for about \$700,000 for powder for target practice and about \$1,000,000 for a reserve supply of powder.

Mr. KITCHIN. So that you really buy how much?

Admiral MASON. In all, we expect to expend about \$1,700,000 in purchase and \$500,000 in manufacture.

Mr. KITCHIN. You buy three or four times as much powder as you manufacture?

Admiral MASON. Yes. The Government factory turns out about one-fourth of the total amount.

Mr. BUTLER. What is your price now on the manufacture of smokeless powder?

Admiral MASON. The estimated cost of manufacture at the Indian Head plant is 54.6 cents per pound. This includes the cost of the alcohol used, but does not include interest on capital invested or administrative expense.

The whole question of the price of powder was recently referred to a joint Army and Navy board composed of officers familiar with the manufacture of powder. This board, after going over the subject very carefully, decided that a fair price to be paid to outside companies manufacturing smokeless powder for the Government was 69 cents a pound, the companies to furnish the alcohol. This amounts to a reduction of about 5 cents a pound on the price which has been paid for some years past, as the Government has heretofore been required to pay for the alcohol at about 4 cents per pound of powder, and has paid the companies 70 cents for the finished product, making the actual cost to the Government 74 cents.

Mr. ROBERTS. That is, the Government manufactures for 15 and a fraction cents less than you can buy it for?

Admiral MASON. That is true if you disregard interest on the plant and administrative expenses.

As I stated to the committee last year, there is no real competition between the companies manufacturing smokeless powder for the Government, as all these companies are practically controlled by a single management. This makes it necessary for us to watch the cost of production pretty closely, and to insist upon a reduction of price whenever experience at Indian Head indicates that such a reduction can be made without unfairness to the companies. The joint Army and Navy board, to which I have referred, looked at all sides of this question, and I am satisfied that its conclusion was fair to both sides. The new price fixed by this board, and which, as I have already stated, involved an actual reduction of nearly or quite 5 cents, has been applied to all contracts for smokeless powder made since the report was approved, October 1, 1906.

The CHAIRMAN. Can we not get a copy of the report of the joint Army and Navy board?

Admiral MASON. A copy of the report of the joint Army and Navy board concerning the price, etc., of smokeless is hereto appended, marked "Appendix C."

The CHAIRMAN. Have you any report showing the cost of the powder plant; how much we have spent on it?

Admiral MASON. Do you mean our own plant?

The CHAIRMAN. Yes.

Admiral MASON. We have an estimated cost. I think it is in the report of the joint board and also in the report that came to the Senate and House last year. I very much doubt the advisability of publishing the report of the joint board, as it contains information which ought not to be made public.

Mr. ROBERTS. Was the reduced cost of powder brought about by the reduction in the price of alcohol due to the free-alcohol bill?

Admiral MASON. No. The companies have never been required to pay duty on the alcohol used in the manufacture of powder for the Government. The alcohol is withdrawn from bond under certificates of the Bureau of Ordnance.

Mr. ROBERTS. In speaking of the price paid for powder you have included cost of alcohol, but it appears that you get that alcohol for them free of duty.

Admiral MASON. Yes. They pay for the alcohol, but we get it for them free of duty. If this alcohol paid the tax, it would make the powder cost very much more. We sign permits and it is very carefully watched by our inspectors to see that none of the alcohol delivered to the companies under this arrangement is used for anything else than Government powder.

Mr. ROBERTS. I want to get in mind this difference in cost. At one time you furnished the alcohol to the private manufacturers and then paid them so much a pound for the powder.

Admiral MASON. We paid 70 cents a pound and furnished the alcohol, which amounted to 4 cents more. This made the powder cost the Government 74 cents. We now pay 69 cents and require the companies to furnish their own alcohol, but we continue the arrangement with the Treasury Department by which the alcohol is furnished free of duty.

Mr. ROBERTS. They pay for the alcohol themselves at the price which would be charged to you if you had to furnish it?

Admiral MASON. Yes.

Mr. KITCHIN. Who has charge of the Government powder factory now?

Admiral MASON. Lieutenant-Commander Strauss.

Mr. KITCHIN. How long has he been there?

Admiral MASON. He has been there about six months this time. He served one tour of duty there several years ago.

Mr. ROBERTS. How long a tour of duty do officers get there?

Admiral MASON. We try to keep them three years on shore duty at such important stations as the powder factory, the Bureau, and the torpedo station.

Mr. KITCHIN. Have you any opinion as to the probable increase in the cost of smokeless powder at the Government plant at present as compared with the cost of it, say three years ago?

Admiral MASON. I think we have cheapened the process somewhat, but I am not able to say exactly how much.

Mr. KITCHIN. You think we make it as cheap now as we ever did?

Admiral MASON. Decidedly so; and in addition to that, we have bettered the quality.

Mr. KITCHIN. You have cheapened the cost and improved the quality at the Government plant?

Admiral MASON. Yes.

Mr. KITCHIN. Does the Government powder compare favorably with that which you buy?

Admiral MASON. It is exactly the same. We watch the processes of the powder companies very carefully, and require them to conform in all essential respects to the processes which we have found important at the Government plant.

Mr. KITCHIN. So that, as far as possible, there is no difference in the product?

Admiral MASON. There is practically no difference. We have commissioned officers as inspectors, who exercise a general supervision over the details of manufacture at the various plants; and they are assisted by subinspectors who are carefully trained, skilled employees of the Government, and who are at all times actually on the ground supervising every detail of manufacture.

Mr. KITCHIN. Is the cost of that inspection included in the 69 cents paid for the powder, or does the Government have to pay that in addition to what it pays for the manufacture?

Admiral MASON. The cost of inspection is an additional charge.

Mr. KITCHIN. Is it included in the cost at the Government factory?

Admiral MASON. Yes.

Mr. KITCHIN. So that, in order to get at an accurate comparison between the cost of powder manufactured at the Government plant and that bought from the powder companies, you would have to add the cost of this inspection to the cost of the powder purchased from the companies?

Admiral MASON. That is one of the matters that was taken into account by the joint Army and Navy board in fixing the price to be paid. The whole matter of cost was gone over very carefully by this board, which was made up of officers nominated for the duty by the Naval Bureau of Ordnance and the Chief of Ordnance of the Army. We have kept in touch with the Army throughout this whole matter, because they use the same powder, although not as much of it as we do.

The CHAIRMAN. What are these "Machine tools for navy-yard, Boston, thirty-nine thousand dollars?"

Admiral MASON. The following statement shows the necessity for this appropriation:

Machine tools, navy-yard, Boston, Mass.	\$39,000
---	----------

This estimate embraces the following items:

Machine tools	\$30,000
Small tools	4,000
Overhead trolley system for machine shop	2,000
Machinery and tools for blacksmith shop	3,000
Total	\$39,000

In the last naval bill Congress appropriated \$15,000 for the purchase of machine tools for the Ordnance Department at this yard. Prior to this installation thus provided for this ordnance shop had no machine tools of any kind. Tools purchased under this appropri-

ation carried in the naval bill of 1906-7 have brought this equipment of the ordnance shop at this yard about on an equality with the ordnance-shop equipment of a first-class battle ship.

During a period of some years this yard was virtually closed, and, especially in the ordnance department, fell into a condition which has required practically complete reequipment.

This yard is yearly increasing in importance with the growth of the Navy, and battle ships are now regularly assigned there for docking and repair.

At the present time there are five battle ships at this yard under repairs, and the ordnance department of the yard has been almost helpless on account of lack of machine tools, necessitating the ordnance work being performed by other departments at the yard which were themselves overtaxed with work.

In order to place the ordnance department on a proper footing for the work required, this further appropriation of \$39,000 for the purchase of machine tools and equipment is considered absolutely necessary.

The CHAIRMAN. Can you not use the money out of the appropriation for ordnance and ordnance stores for this?

Admiral MASON. No, sir. We have so many pulls on ordnance and ordnance stores that we have been compelled to put in these outside requisitions.

The CHAIRMAN. The next is on page 28.

One electric traveling crane of forty thousand pounds capacity for proposed new storehouse at navy yard, League Island, Pennsylvania, seven thousand five hundred dollars.

What is that for? Have you a crane there now?

Admiral MASON. One electrical traveling crane of 40,000 pounds capacity for proposed new storehouse at navy-yard, League Island, Pa., \$7,500. The Bureau has requested the Bureau of Yards and Docks to include in its estimates the sum of \$46,000 for an addition to the ordnance storehouse, and if this is allowed the traveling crane will be necessary for its proper equipment.

Ordnance storage facilities at this yard are inadequate, especially as regards guns, mounts, etc., and the crane will be necessary.

Mr. BUTLER. Forty-six thousand dollars?

Admiral MASON. Yes; for an addition to the ordnance storehouse, and if the committee grants that appropriation a traveling crane is necessary to go into it.

Mr. BUTLER. I have that building in my mind, and is it possible that that building is not large enough for League Island?

Admiral MASON. No, sir.

Mr. BUTLER. Will you tell me how many war ships are at League Island now?

Admiral MASON. I do not know, but I do know that within a month the Bureau has received a request to keep the ordnance material in store on board the *Brooklyn* in reserve because there was not storage room enough.

Mr. BUTLER. That is not your fault.

Admiral MASON. At that yard they are liable at times to have four or five ships.

The CHAIRMAN. The next is—

For Naval Gun Factory, Washington, District of Columbia: New and improved machinery for existing shops, one hundred and fifty thousand dollars.

Is that the same as last year?

Admiral MASON. The same.

The CHAIRMAN. Do you have it every year?

Admiral MASON. Yes. A like amount was appropriated last year and it is necessary that the same amount should be appropriated this year, owing to the increased number of shops and the working of several shifts in all the shops. The consequent wear and tear on the present machinery being very great and a large portion of it nearing its limit, it requires replenishment in order that some sort of a standard of efficiency may be kept up. This is absolutely necessary.

Approximate total value of machinery at Washington Navy-Yard is about \$4,000,000.

The CHAIRMAN. The next is—

Machinery, cupolas, furnaces, and so forth, for proposed new foundry, one hundred and twenty-one thousand and seventy-five dollars.

Admiral MASON. That is the same thing that we thrashed out last year. It is absolutely necessary.

The reasons for requiring this item have been so fully stated they can only be reiterated. A new foundry is indispensable for the economy of the gun factory. It is the most needed of all the improvements that could be recommended. The present foundry is antiquated and inadequate in size and unsuitable as a foundry for an institution like the Naval Gun Factory. On account of its unsanitary condition it is a menace to the health of the employees and officers of the yard in its present situation. The Government losses every year by not having better facilities would soon equal the amount requested to properly provide for all the requirements of this portion of the plant and its increased product would materially add to the production of armament by this factory, saving in both time and expense. At the present time the yard foundry is working up to its extreme capacity and in case of war the emergency conditions could not be met. We are now practically at a standstill on account of our inability to obtain castings due on existing requisitions. The reasons for this foundry were fully set forth in my hearing before the House Naval Committee last year. (No. 38, January 11, 1906.)

Mr. BUTLER. It is the beginning of a factory that will ultimately cost \$4,000,000?

Admiral MASON. The estimate for this \$121,075 is for machinery. I do not know how much yards and docks has in for this year, but I think it is \$150,000 to start with. It will cost \$300,000 for the building before it is finished. It is going to be a model foundry. I consider it absolutely necessary. We are losing money all the time and losing time at the navy-yard here on account of the lack of facilities for making castings.

Mr. ROBERTS. These castings you propose to make here are the small castings?

Admiral MASON. Small castings and type large castings. The castings people are so busy now that unless we give them a big order they will not touch it. When we start in on a new design we will

say, "Here are certain improvements we will put in," and we do not want to send out and get castings for 100 mounts until we try 1 mount. We try to get castings for a type mount, and they will not touch it. One firm said, "We will not stop work just to help the Government for that."

Mr. BUTLER. Can you not build it for less than \$300,000?

Admiral MASON. You can build a shack down there. The building proposed will cost \$300,000, and the necessary tools, cupolas, furnaces, etc., \$121,000 more.

Mr. BUTLER. Would not that do temporarily? Is it not a fact that after the business pressure subsides a little there will be plenty of factories to make these?

Admiral MASON. I do not think so. We have always been subjected to delays in getting castings and have had to pay high prices. I think we should have a foundry, and have the best that is going and the most modern.

The CHAIRMAN. Of course that is the old story and we know all about it, and you can thrash it out here for two hours and not get any decision out of it.

Mr. ROBERTS. Do you need that 110-ton crane, irrespective of the new buildings?

Admiral MASON. Yes. This estimate is for the remodelling of the 110-ton crane in north gun shop, and has no connection with the new foundry. The estimate is for remodelling 110-ton crane in north gun shop, \$30,000.

The 110-ton crane in the north gun shop has been in use about fifteen years, and the carriage and trolley are somewhat antiquated, besides being very much worn. It is doubtful if these parts will last over eight months, and they should be replaced with the latest improved parts, which will make a serviceable crane for use in years to come. Original cost of this crane, \$82,000.

The CHAIRMAN. The next is "Machinery for locomotive house, twelve thousand dollars."

Admiral MASON. Machinery for locomotive house, \$12,000.

The present locomotive house is inadequate for the number of locomotives and locomotive cranes we now have, as the extension of the Gun Factory has acquired the purchase of additional ones recently. It is therefore necessary that we should have a larger house to accommodate these machines. The present one does not admit of extension and the ground it occupies is needed for other purposes.

Without proper housing facilities in winter steam must be kept up on locomotives and cranes all the time to prevent freezing, thus greatly increasing running expenses due to attendance and consumption of fuel. Seven of the ten engines and wreckers can not now be housed and are consequently exposed to the weather on the outside.

This machinery is necessary if the locomotive house is built. Itemized, the money will be spent as follows:

One 25-ton overhead crane, complete, with runways-----	\$8, 000
Tracks, switches, frogs, and appliances for drop pit-----	3, 000
Hydraulic jacks, tube cleaners, pneumatic drills, and hammers for repair work -----	1, 000
	<hr/>
	12, 000

The CHAIRMAN. That is dependent upon the authorization of the building?

Admiral MASON. Yes.

The CHAIRMAN. The next is "For modernizing the battery of the *Iowa*, thirty-six thousand dollars."

Admiral MASON. The *Iowa* has been in commission between nine and ten years, during which time no material changes in her battery have been made. She is at present in about the same condition as regards battery as were the *Massachusetts* and *Oregon* before it was decided to modernize their batteries. The *Iowa* will doubtless be considered as an effective unit of the fleet for several years to come, and should be maintained in an efficient condition so far as her battery is concerned. To rearm her with 12-inch 45-caliber and 8-inch 45-caliber guns in balanced turrets (her 12-inch turrets are already of this type) would involve an additional expenditure of about \$940,000, which is not believed to be warranted. The expenditure of the sum estimated for will put her as far ahead of the *Indiana* class as she was originally.

What it is intended to do in ordnance is to furnish modern sights for 12-inch and 8-inch turrets, new sighting hoods, electric ammunition hoists, and electric elevating gear. I think it is necessary. I think those ships, if we do not modernize them pretty soon, will go into the first reserve.

Mr. ROBERTS. And then into the scrap heap?

Admiral MASON. Yes.

The CHAIRMAN. The next is, "For modernizing the batteries of the *Monterey* and the *Monadnock*, twenty thousand dollars." What about that?

Admiral MASON. They are old monitors. These vessels are maintained on the Asiatic Station, and in time of war would doubtless be depended on for the defense of some port in the Philippines. It is extremely desirable that they be made as efficient as possible.

This amount will equip these vessels with new sights, new sighting hoods, and modification of turret gear.

Mr. BUTLER. What kind of guns have they?

Admiral MASON. Medium-power modern guns.

Mr. BUTLER. Effective guns for armored purposes?

Admiral MASON. Yes; effective guns.

Mr. BUTLER. Are they not ready for the scrap heap?

Admiral MASON. With these modifications they will last for some time. They will probably never go to sea again. But they are very good floating forts or batteries for the Philippines. I should say that would be a good investment, that \$20,000.

The CHAIRMAN. How about this next provision?

For providing new turret sights for the four monitors of the *Arkansas* class, sixteen thousand dollars.

Admiral MASON. That is the same thing, except that these are monitors of the *Arkansas* class. These vessels are modern in all respects except their turret sights, and their fighting value is much below what it could be made by the expenditure of this sum of money.

Turret sights cost about \$2,000 per gun.

The CHAIRMAN. The next is—

New battery for the *Brooklyn*, one hundred and seventy-seven thousand two hundred dollars.

Admiral MASON. The *Brooklyn* is an armored cruiser, still very good.

Congress has, in two appropriations, provided more than this sum for new guns and armor for the *New York*; the *Brooklyn* has been in commission more than ten years and, to be made effective, should be equipped with a more modern battery; if so equipped she would again become the equal or superior of the *New York*. To equip her with 8-inch 45 caliber guns in balanced turrets would require an additional expenditure of \$540,000 which, as in the case of the *Iowa*, is not considered advisable nor warranted, considering the cost that would be involved under other bureaus.

It is intended to furnish this vessel with a new 5-inch battery, new sights for turret guns, and modify turret ammunition hoists and mounts.

The CHAIRMAN. Has she ever had anything done to her guns since she was built?

Admiral MASON. I think not, except that during the Spanish war the 5-inch mounts were rendered useless, and they were replaced.

Mr. BUTLER. Have you any objection to telling us why it is not advisable to thoroughly modernize the *Brooklyn*? Just for the information will you tell us that? It will cost, you say, five or six hundred thousand dollars to modernize her?

Admiral MASON. In ordnance alone.

Mr. BUTLER. In ordnance alone? If you brought her up to a first-class ship?

Admiral MASON. Work has to be done under Steam Engineering and Construction and Repair, and other bureaus. That \$500,000 in ordnance would mean probably three times as much in construction, and would require additional expenditures in equipment. The ship would then be but little better than as if the plan estimated for is carried out, and the work would take so long that the vessel would be unavailable for use for three or four years. The proposed work can be done in a year or less.

Mr. ROBERTS. Is she not now being thoroughly overhauled at the New York yard?

Admiral MASON. No; she is in ordinary or reserve at League Island.

Mr. ROBERTS. The *New York* is being overhauled?

Admiral MASON. Yes; the *New York* is being overhauled. That was authorized by Congress. We expect to put the *Brooklyn* in pretty near as good condition as the *New York* at very much less expense. The changes in the *New York* were more extensive, as she, though not much older than the *Brooklyn*, was greatly inferior to her as to turrets and turret gun mounts. Half measures would have been of no use in her case.

Mr. ROBERTS. Steam engineering is tearing her all to pieces now.

Admiral MASON. Yes. Being an older ship than the *Brooklyn*, she needs more repairs.

Mr. BUTLER. If you put these new guns and improvements on the *Brooklyn*, would she then go in the battle line of the Navy?

Admiral MASON. No; she is an armored cruiser.

Mr. BUTLER. Do you remember when she was built?

Admiral MASON. Ten or twelve years ago. She was completed in 1896.

She is an excellent ship, and although not as powerful as the present armored cruisers by any means, either as regards battery or protection, the *New York* and *Brooklyn* still are speedy, 22-knot vessels, and will put in a good many years' service as armored cruisers yet.

Mr. BUTLER. A modern armored cruiser would cost something like \$5,000,000?

Admiral MASON. Yes.

Mr. BUTLER. And would it not be wise to modernize the *Brooklyn*, if it could be done for \$2,000,000?

Admiral MASON. I don't think so, because after commencing work you would probably find that it would cost a good deal more and it would take a long time. Her boilers, of course, will not last forever, and they would require replacing, and her engines would finally wear out. It is a good deal better to let her go this way and last ten years longer.

Mr. BUTLER. In four or five years you would expect the *Brooklyn* to be ready for the reserve basin, would you not, or for the retirement list?

Admiral MASON. In five years from now I would say the *Brooklyn* should probably go on the first reserve list. That is not the retired list, but laid up for use in an emergency.

Mr. BUTLER. She has been a good ship.

The CHAIRMAN. How about this next item—

For completing the work of modifying four-inch forty-caliber mounts, and providing new sights; and for modifying five-inch forty-caliber mounts, and providing new sights for same, two hundred and thirty-five thousand dollars.

Admiral MASON. The estimates for 1907 include an item of \$320,000 for these purposes, but Congress did not appropriate. Such of the work as was absolutely necessary for fitting out ships on recommissioning has been done out of current appropriations as a part of the general work of the Bureau. The estimates now submitted cover work which will be necessary to fit for recommissioning all vessels carrying guns and mounts of the character mentioned.

The CHAIRMAN. Does that cover it all?

Admiral MASON. Yes; I think so.

The CHAIRMAN. The next is—

For fire-control instruments for nineteen battle ships and twelve armored cruisers; for fire-control instruments for four monitors and twenty-five cruisers, five hundred and sixty-seven thousand dollars.

Is this something new?

Admiral MASON. Yes; this comes from the target practice. The present system installed in the vessels was designed to fulfill the requirements of the slow rate of fire used a few years ago.

Experience at target practice indicates that rapid hitting is possible, and information from abroad indicates that rapid hitting is necessary.

We have improved the guns, accessories, mounts, and ammunition until each gun can fire rapidly and accurately; but the batteries as a whole are inefficient, because we can not transmit rapidly to

the guns the information absolutely necessary to insure accuracy, nor is the system sufficient to permit of control of rapid fire.

The installation of a new system is necessary before we can reap any commensurate benefit in battle efficiency from the earnest work with the guns in the last few years. The ships will not be ready for action until an improved system is installed.

The CHAIRMAN. Do you want to do that all at once—in one year—or can you cut that down?

Admiral MASON. No, sir; that ought to be done at once.

The CHAIRMAN. We have lived all these years without them.

Admiral MASON. Yes; and we went along for a long time without hitting the target, too. All the nations abroad are doing this. I think we surely ought to have this appropriation.

The CHAIRMAN. The next is—

For the manufacture, purchase, repair, and maintenance of a reserve stock of mines and mine appliances, two hundred thousand dollars.

Admiral MASON. That is a new item.

The mine outfits of battle ships and armored cruisers are complete and the torpedo station is prepared to furnish the mine outfits to the new ships as they go into commission.

In order to carry out the recommendation of the General Board, the Bureau has included in its estimates the amount necessary to manufacture and prepare 500 reserve mines in addition to those carried by the ships.

Our present outfit of mines consists of 13 for each battle ship and armored cruiser, and these mines are carried on board for self-protection—that is, when forced to anchor in the vicinity of an enemy for coaling or making repairs the ship or fleet can send out its mines and lie secure behind them. Offensive mines, such as were used by the Japanese for blockading Port Arthur, or a large supply of defensive mines for advanced bases we have not on hand.

It has been calculated that we should have at least 2,500 mines for use in war, and this item is based on the supposition that we should accumulate that number in five years, at the rate of 500 per year.

That is only getting ready for the emergency.

The CHAIRMAN. Do you regard that as important this year?

Admiral MASON. Yes; it is regarded as very important.

The CHAIRMAN. We would like to have you put down in the hearings those things in the line of improvements which you regard as most important; indicate in the order of importance all of these items.

Admiral MASON. Very well.

The CHAIRMAN. The next is—

For lining four twelve-inch Mark III guns; for replacing one hundred three-inch Mark III breech plugs; for replacing Mark IX locks; for gas ejectors for seven-inch, six-inch, and five-inch guns; for fifty air compressors, and for repairs and changes to guns and mounts, one hundred and fifty-five thousand dollars.

Why could not that be done under your appropriation for ordnance and ordnance stores?

Admiral MASON. It could if you would increase that appropriation enough for that. The necessity for this appropriation is as follows: The erosion of guns at a high pressure and with the large charges of

powder continues, making necessary the relining of the larger calibered guns after the firing of comparatively a few rounds. No effective way of stopping it has been discovered, but various methods are being tried. All metals so far subjected to erosive tests show such erosion.

The apparently poisonous effect of smokeless-powder gases in inclosed spaces has rendered necessary some method of gas ejection for medium-caliber guns. Blowbacks from these guns are infrequent when the present combined sponge and rammer is used, but nevertheless the gas makes its way into the gun spaces, rendering them uninhabitable after a brief period. Loaders are frequently overcome by these gases. There is also possible danger of a spark igniting them when they are collected in any inclosed space, with danger to personnel and inflammables as well as ammunition.

The excessive use of small breech mechanisms which fire very quickly and require a great deal of exercise to get the best results in the present systems of target-practice competition, and as a prerequisite to good battle and war conditions, has caused much wear of the same, and a number of 3-inch breechblocks will have to be replaced. This is a matter which can be provided for in future by the supply at first of spare breechblocks for guns subjected to such excessive work, so far as the metal is concerned, but no reserve was supplied when the guns were built, and it should be now.

The approximate expenditures under this appropriation are itemized as follows:

Reline four 12-inch guns, at \$9,000 each-----	\$36, 000
Replace 100 3-inch breechblocks-----	6, 000
Replace 180 Mark IV locks-----	10, 000
400 gas ejectors, intermediate battery-----	60, 000
Air compressors, 50 at \$260-----	13, 000
Repairs and changes to guns and mounts-----	30, 000
Total -----	155, 000

MR. BUTLER. Have you anything additional to tell us since your last hearing in regard to the effect on these guns of firing them occasionally in target practice?

ADMIRAL MASON. No; except we know that they erode even more than we expected with the high velocities.

MR. BUTLER. I understand that the men can be trained in target practice just as effectively and accurately by using a less charge.

ADMIRAL MASON. Yes; the men can be; but we can not be as sure of what the material is going to do.

THE CHAIRMAN. How about this next item:

For one hundred eighteen-inch torpedoes; converting sixteen destroyers to modern boats; converting eleven three and fifty-five one hundredths meter boats to five-meter boats, six hundred and sixteen thousand dollars.

ADMIRAL MASON. This whole torpedo question is a burning one. It is worse now than the reserve ammunition was. We have not even enough torpedoes to supply our ships, and this estimate is to supply and overcome deficiencies actually existing by the purchase of 100 18-inch torpedoes, the converting of 16 destroyers to use these new torpedoes, and the converting of 11 of the larger torpedo boats to use 5-meter torpedoes of the type now used by the destroyers. We have now in service 16 destroyers, 15 torpedo boats, 8 battle ships, and 1

submarine that use 5 m. by 45 cm. torpedoes. These ships require for their full armament according to existing allowances 142 torpedoes. We have for the supply of these ships only 100 torpedoes of the type they use. The shortage is, therefore, 42 5-meter torpedoes, which means that we are short of our full supply of this type the equipment for 10 destroyers. A similar condition exists as regards the supply of short torpedoes (3.55 m. by 45 cm.). We have 3 battle ships, 11 large torpedo boats, and 7 submarines that use the short torpedo and these vessels require 86 torpedoes. Eliminating the obsolete torpedoes of this size, which are not fit for use in war, we have 62 torpedoes for the supply of these vessels. This is a shortage of 24 torpedoes, which is a supply for 6 of the larger torpedo boats.

It is designed to remedy the present situation by the purchase of 100 5 m. by 45 cm. torpedoes. This new torpedo, however, requires a greater pressure of air than the present air plants of the destroyers can supply, so to use them the destroyers will need new compressors, and by "converting to modern boats" is meant the installation of new air plants.

If this is done we will then have an excess of the old type of 5 m. torpedoes, and to use these, and at the same time relieve the shortage in short torpedoes, it is desirable to change the 11 larger boats (which are as large as the smaller foreign destroyers), so as to fit them to use the long torpedo. This is a step toward fitting these boats for the high-powered torpedoes, which will ultimately become necessary when the older type of torpedoes is exhausted. The material taken out of the destroyers will not be scrapped, but can go into reserve for the torpedo boats and the tubes of the boats will be lengthened, not replaced.

Mr. BUTLER. How long does it take to manufacture the torpedoes?

Admiral MASON. The Bliss company can manufacture 100 a year with their present equipment. We hope to be able to manufacture 100 a year when Congress gives us a torpedo factory at Newport, which we are asking for this time. Of course the factories can be increased in size. Just at present we are not getting along as fast, because Bliss is frozen up.

The CHAIRMAN. How many concerns are manufacturing torpedoes?

Admiral MASON. In this country?

The CHAIRMAN. Yes.

Admiral MASON. Only one. The E. W. Bliss Company has control of the situation. That is why we want a torpedo factory.

The CHAIRMAN. Has that company a capacity of 100 a year?

Admiral MASON. Yes; it has a capacity of at least 100.

Mr. ROBERTS. Before you get away from that, I wanted to understand this, "Converting eleven three and fifty-five one-hundredths meter boats to five-meter boats." What do these dimensions mean?

Admiral MASON. They are boats that fire 3.55-meter torpedoes—the short torpedoes.

Mr. ROBERTS. That is the size of the torpedoes that they fire?

Admiral MASON. Yes; they were the old original boats that fired the short torpedoes. We have only a few of those torpedoes.

Mr. ROBERTS. That does not relate to the measurement of the boats at all?

Admiral MASON. No; to the torpedo used and tubes on board.

The CHAIRMAN. The next is—

For twelve wrecking outfits; repairs and alterations to torpedoes and torpedo gear, including sights, training gear, new tube parts, and so forth, and to replace torpedoes expended in practice, seven hundred and sixty-six thousand dollars.

Admiral MASON. That is a mistake. That should be \$150,000.

The appropriation should read: "For twelve wrecking outfits; repairs and alterations to torpedoes and torpedo gear, including sights, training gear, new tube parts, etc., and to replace torpedoes expended in practice, \$150,000," instead of \$766,000.

Briefly, the reasons are as follows:

It is desired to add to the stations where wrecking outfits are kept, and also to keep a larger supply than heretofore of wrecking material at New York, Norfolk, and Boston. This will not be expended in one year, but should be provided and kept for an emergency. There should be an appropriation for this outside of the routine ordnance and ordnance stores.

Sights and training gears should be put on the tubes of all sea-going torpedo craft. This will require approximately \$25,000 for the destroyers and larger boats—45 tubes in all.

Torpedoes in the past have been considered to a large extent indestructible, but it has been found that 25 or 30 are lost, worn out, or damaged during the year. The increase in efficiency of the torpedo service will cut down the loss, but the increased number of runs will increase the number of worn-out torpedoes. This is an allowance of loss of about 6 per cent on the total allowance of the Navy, and is considered a very small allowance.

The committee's attention is called to the clerical error in the amount asked for under this appropriation, which should be \$150,000, instead of \$766,000.

This is itemized as follows:

12 wrecking outfits	\$25, 000
Repairs and alterations to torpedoes and torpedo gear, etc.	25, 000
Replacing loss of torpedoes (20 per year)	100, 000
Total	150, 000

One wrecking outfit consists of 12 mines (32 pounds gun cotton each) and necessary wires, batteries, etc., about \$2,000.

Mr. ROBERTS. What are those wrecking outfits? What is the use of them?

Admiral MASON. By direction of the Department we have to keep in stock wrecking outfits for the blowing up of derelicts along the coast for the protection of commerce.

Mr. ROBERTS. What are those outfits, boats or ships?

Admiral MASON. A wrecking outfit consists of 12 mines, 4,000 feet of armored cable, a hand electric generator, tools, chemicals, and electrical testing instruments for care and test of outfit. When the Department is informed that there is a derelict on the coast menacing navigation the nearest available man-of-war or auxiliary is sent to the nearest yard and gets an outfit and goes out and destroys the wreck.

Mr. ROBERTS. We have authorized a derelict destroyer in the Revenue-Cutter Service. She is now being built. When that is in operation will not that do away with the necessity of the Navy Department doing this work?

Admiral MASON. If she can look out for all the wrecks along the coast. The Navy will be called on for mines anyway; we gave a revenue cutter an outfit last week. The Navy Department will probably be called upon for ships also. We have had as many as three ships out after wrecks at once during the past year. We now keep a wrecking outfit on hand at Boston, Newport, New York, Norfolk, Key West, Port Royal, Pensacola, Mare Island, Puget Sound, and Cavite.

It has been found that one outfit is not sufficient, especially on the east coast of the United States, and it is proposed to add to the present equipment so as to provide wrecking outfits as follows: Boston, 2; Newport, 6 (supply station); New York, 3; Norfolk, 3; Key West, 1; Port Royal, 1; Pensacola, 1; Mare Island, 2; Puget Sound, 2; Cavite, 1.

Mr. ROBERTS. How many of those do you use in a year?

Admiral MASON. We have used, I guess, about 10 or 12 in the last year. It is difficult to say just how many will be used, but one heavy gale on the coast may call for six or eight outfits at once.

It must be understood, however, that the explosives and mine cases only are expended. Once provided, the outfits can be kept up very cheaply.

The CHAIRMAN. The next is:

Reserve guns for auxiliary cruisers: For reserve guns for auxiliary cruisers, five hundred thousand dollars.

Can we cut that appropriation down?

Admiral MASON. I do not think we got any last year.

Mr. ROBERTS. There is a mistake here in the bill. The amount is carried out in figures as only \$50,000.

Admiral MASON. We did not get that last year. That should be "For reserve guns for auxiliary cruisers, \$500,000." This is for repairing, modernizing, and fitting with modern sights a considerable number of 4 and 5 inch 40-caliber guns and mounts, and for procuring an additional number of new guns and mounts. The total amount appropriated under this head up to the year 1905-6 was \$2,075,000. The Bureau did not estimate for any sum for the present fiscal year.

It is now believed to be very necessary to obtain additional funds, as there are on hand a considerable number of guns and mounts of more or less obsolete types which are still perfectly serviceable, but are not efficient, owing to their not being modernized, and the Bureau can not out of its regular appropriations perform the work of repairing, modernizing, and fitting with modern sights the guns and mounts above mentioned, and this estimate is to cover such work, which, if done, will secure a reserve of modernized guns and mounts, as well as for procuring an additional number of new guns and mounts to be available for use in time of war.

This is itemized as follows:

Fifty 3-inch 50-caliber guns, Mark V, with mounts and sights, at \$5,500 -----	\$275, 000
Fifty-five 4-inch mounts for 40-caliber guns to be modernized and fitted with yoke sights -----	105, 000
Sixty mounts for 5-inch 40-caliber guns to be modernized and fitted with modern sights -----	126, 000
Total -----	506, 000

There is a small available balance under this appropriation not yet obligated.

The CHAIRMAN. What was it last year?

Mr. BUTLER. Did we make this appropriation last year?

Admiral MASON. No, sir.

The CLERK OF THE COMMITTEE. This is a new item.

The CHAIRMAN. The next is "Reserve ammunition."

Admiral MASON. Reserve ammunition, \$4,000,000.

Last year this title was "Reserve powder and shell." It has been changed to "Reserve ammunition" because the components of ammunition other than powder and shell, particularly cartridge cases and powder tanks, are just as necessary as the powder and shell heretofore appropriated for.

There is now no appropriation under which a reserve of cartridge cases and powder tanks can be accumulated. As a result, there is now no reserve of these necessary articles, except for the older calibers.

As stated in last year's estimates, it seems imperative that there should be acquired at the earliest date practicable a reserve supply of ammunition sufficient to refill the main battery magazines of the fleet twice and the secondary battery magazines once. This is because a modern battle ship at her maximum rate of gun fire will exhaust the magazines supplying her main battery in about half an hour, and her secondary battery ammunition will not last much longer. That the accumulation of this reserve should be undertaken at once is evidenced by the fact that the manufacture of shell of sufficient merit to meet the Bureau's requirements has, in many instances, taken from two to three years.

The expenditures which would be required to provide a reserve of the proportions stated above are so great that it is realized that a sufficient reserve to fill the magazines of the fleet once is all that can now be attempted. It was estimated last year that \$9,126,526 would be required to accumulate one reserve of ammunition. Toward this \$2,000,000 was appropriated by the last Congress.

At this rate of accumulation, the small reserve sufficient to fill the magazines of the fleet only once will not be completely appropriated for until the fiscal year 1910.

The following is an itemized statement of the probable expenditures under this appropriation:

Smokeless powder	\$911, 200
Armor-piercing shells, mostly above 6-inch caliber	2, 600, 000
Powder tanks and cartridge cases (to accumulate 20 per cent of one reserve)	368, 000
Fuzes	70, 000
Incidentals: Primers, bursting and ignition charges, distance pieces, etc	50, 000
	<hr/>
	4, 000, 000

Much difficulty is experienced in procuring armor-piercing shell that will meet the Navy's severe requirements, and it takes some time to manufacture them.

This appropriation will provide about two-thirds of one reserve for all vessels on the Navy list.

Mr. ROBERTS. What do you say about the provision that "no part

of this appropriation shall be expended for the purchase of shells or projectiles," and so forth?

Admiral MASON. I should prefer that it should go out. This was all discussed under a previous question.

The CHAIRMAN. The next is—

Reserve guns for ships of the Navy: Purchase and manufacture of reserve guns for ships of Navy, one million three hundred and ninety-six thousand five hundred dollars.

Admiral MASON. Reserve guns for ships of the Navy. For reserve guns for ships of the Navy, \$1,396,500.

By direction of the Department in its indorsement of August 15, 1905, and in accordance with a recommendation of the General Board, the Bureau in its last estimates submitted an item of \$1,500,000. This was approved by the Department, but was reduced by Congress to \$750,000.

This estimate is submitted for reserve guns for ships of the Navy based on the total number of high-power guns now afloat, down to and including the *Idaho*, a fair working reserve for the present being considered one-fourth of that number. The amount estimated should provide the following guns based on present Naval Gun Factory prices, viz: Twelve 12-inch Mark V guns, two 10-inch Mark VII guns, two 8-inch Mark VI guns, two 7-inch Mark II guns, two 6-inch Mark VIII guns, seventy-five 3-inch Mark V guns and mounts.

This appropriation is considered as absolutely necessary for the efficiency of the Navy. The manufacture of these guns must be undertaken at the earliest practicable moment in order to have them ready to replace guns while withdrawn from service for lining, and as this process is very slow the necessity is augmented.

All vessels after the *Idaho* have their reserve guns estimated for under the appropriation "Armor and armament," and will be considered a part of the armament of the vessel, the allowance for reserve being 25 per cent.

The CHAIRMAN. We went into this fully last year.

Mr. BUTLER. We had how much last year?

The CHAIRMAN. Seven hundred and fifty thousand dollars.

Admiral MASON. We have obligated that, and the guns are being made.

The CHAIRMAN. The next is—

Torpedo station, Newport, Rhode Island: For labor, material, freight and express charges; general care of and repairs to grounds, buildings, and wharves; boats, instruction, instruments, tools, furniture, experiments, and general torpedo outfits, and new smokestack and flues for boilers, seventy thousand dollars.

Admiral MASON. This appropriation has been itemized, as directed by the Department in its circular letter of September 7, 1906, as follows:

For labor, material, freight and express charges-----	\$39,700
General care of and repairs to grounds, buildings, and wharves-----	17,700
Boats, instruction, instruments, tools, furniture, experiments, and general torpedo outfits-----	7,600
Total-----	65,000

It is pointed out that the estimated amount set opposite each item as a possible expenditure is only approximate and liable to be increased or diminished by unforeseen contingencies, and also that the

aggregate amount appropriated for several purposes may be, in fact, differently distributed among them.

This appropriation is the same as for a number of years past, and is for labor, material, maintenance, and the general routine expenses of the station, as detailed above.

New smokestack for boilers, \$5,000.

The \$5,000 additional is for a new smokestack for boilers.

This new smokestack for boilers is to provide sufficient draft for the present boilers. The present smokestack was erected about 1874 for a 50-horsepower locomotive boiler, and afterwards this boiler was removed and at intervals four other boilers installed, two of 80 horsepower, one of 75 horsepower, and one of 100 horsepower. The original stack that was sufficient for the 50-horsepower boiler is entirely inadequate to take care of four boilers of combined 335 horsepower, and this stack is also necessary to obtain the best and most economical work out of the boilers, whereby the efficiency of the plant will be materially increased. In case the appropriation asked for a torpedo factory, \$155,000, at the torpedo station is passed, either this \$5,000 can be omitted or the other decreased by \$5,000, as by an error the smokestack was included in both. This is absolutely necessary, however.

For reserve torpedoes and appliances, \$500,000.

The Bureau in its last estimates submitted an item of \$100,000 under this head, which was disallowed by the Department.

There exists no reserve of torpedoes, a situation which, as long as it lasts, means that the torpedo fleet is not prepared for war. The Bureau considers that the minimum reserve should be an allowance for the fleet, approximately, of 300 18-inch and 320 21-inch torpedoes. The Bureau recommends, as a step toward this minimum, the manufacture of 100 18-inch torpedoes at the torpedo station.

The reason for this large increase in the estimate is due to the fact that for nearly five years nothing was done in the Navy with regard to torpedoes and appliances. Then the Bureau was suddenly called on to not only care for a most extensive future schedule, but also to cover the omissions of the past, and this within the space of a short time. The fiscal year 1906-7 should see the completion of all ships now authorized except the *New Hampshire*, *North Carolina*, *Montana*, and three scout cruisers, and the *South Carolina* and *Michigan*, and the three destroyers, the modernizing of all older vessels that are worthy of it, and the establishment of sufficient reserves to put this branch on an efficient war basis. This latter must be done in addition to the regular yearly maintenance, which is growing rapidly in proportion to the growth of the fleet. Little beyond experimental work has been done so far. The real expenditure must be between this date and the end of the fiscal year 1907.

The present torpedo situation is as follows:

Needed for present fleet:

5 m. by 21 inches	312
5 m. by 18 inches, submerged	66
5 m. by 18 inches, above water	148
3.55 m. by 18 inches, above water	80

Total needed	606
--------------------	-----

On hand and ordered :

5 m. by 21 inches -----	300
5 m. by 18 inches submerged -----	60
5 m. by 18 inches above water -----	150
3.55 m. by 18 inches above water -----	60

Total -----	570
-------------	-----

Ten years hence we shall need :

For present vessels -----	600
For (probably) 10 new battle ships -----	160
For (probably) 10 new scouts -----	80
For (probably) 20 new destroyers -----	120

Total torpedoes -----	960
-----------------------	-----

It may be taken for granted from experience that none of the torpedoes now in existence or building will last ten years, so making up shortage_	36
---	----

We shall need to build, torpedoes -----	996
and a reserve should duplicate this -----	996

Torpedoes (total required) -----	1,992
----------------------------------	-------

and we should order, therefore, 200 a year and have the facilities for building them.

With the present vessels we lost at least 20 torpedoes a year. The torpedoes we have will not last forever, and we are having torpedo target practice just the same as any other practice.

Mr. BUTLER. You mean that you lose them by exploding them?

Admiral MASON. They are lost by breaking up or sinking or running into the mud, so that they can not be found. These torpedoes are automobile, and if they run 4,000 yards and then happen to strike something or sink at the end of the run it is like hunting for a needle in a haystack to look for them, although we do it with a diver or by dragging or grappling.

The CHAIRMAN. How much do they cost now?

Admiral MASON. We have agreed to pay \$7,100 each for the 300 21-inch contracted for with the E. W. Bliss Company.

The CHAIRMAN. Do you want to enter upon the manufacture of them?

Admiral MASON. Yes, sir.

The CHAIRMAN. To build a plant?

Admiral MASON. We want to build a plant at the torpedo station to have a capacity of about 100 torpedoes a year to be manufactured.

Mr. BUTLER. How much will that plant cost us?

Admiral MASON. The estimates are as follows.

Mr. BUTLER. Just give us the sum total, Admiral.

Admiral MASON. It is \$155,000.

The CHAIRMAN. That is for building and machinery?

Admiral MASON. Complete; yes, sir; for both.

Mr. BUTLER. Then for an expenditure of \$155,000 you can turn out 100 torpedoes a year that would cost how much?

Admiral MASON. It would cost about \$500,000 to manufacture 100 21-inch torpedoes. We will probably have to pay a royalty. That has not been settled yet.

Mr. BUTLER. How much royalty?

Admiral MASON. The inventor asks \$750, but I do not think we should pay him as much; he ought not to be paid more than \$500 at the most.

Mr. BUTLER. Did you estimate how much those torpedoes would cost us, to construct them—those 100 torpedoes?

Admiral MASON. The torpedo station has just sent in an estimate of \$3,500 for each 21-inch torpedo, exclusive of the percentage on the plant, which will be between 30 per cent and 40 per cent. I would say that \$5,000 each would be a fair estimate of the cost per torpedo.

Mr. ROBERTS. Does that include the royalty?

Admiral MASON. No, sir.

Mr. BUTLER. Then we would be saving about \$1,500 to \$2,000 apiece on the torpedoes?

Admiral MASON. Yes; approximately.

Mr. BUTLER. What experience have you had in the manufacture of torpedoes?

Admiral MASON. We have not actually built any torpedoes at the torpedo station, but have had extensive experience in the manufacture of practically all parts, in assembling, and in repairs.

Mr. BUTLER. Your figure of \$5,000 includes the labor and material that you would put in, and the percentage on the plant?

Admiral MASON. Yes.

The CHAIRMAN. You have never made any detailed estimate or report of what might be called the cost of this, have you?

Admiral MASON. The cost of the torpedo itself?

The CHAIRMAN. Yes; or what you could manufacture them for?

Admiral MASON. The torpedo-station estimate was based on the cost of the individual parts.

The CHAIRMAN. What do they cost abroad?

Admiral MASON. We do not know what the 21-inch torpedo costs abroad. For that matter, I don't think they have a 21-inch torpedo abroad. The Whitehead torpedo is in general use abroad.

Mr. ROBERTS. Are these Whitehead torpedoes which are made by Bliss?

Admiral MASON. No. These are the Bliss-Leavitt—entirely different from the Whitehead.

Mr. ROBERTS. Can you buy the Bliss-Leavitt abroad?

Admiral MASON. No.

Mr. ROBERTS. Are they very much more effective weapons?

Admiral MASON. Ours?

Mr. ROBERTS. The Bliss-Leavitt.

Admiral MASON. I think so. The Whitehead torpedo has usually a three or four cylinder Brotherhood engine, worked by compressed air in the cylinder, and the Bliss company has a turbine, which increases the range and speed for the same amount of air, and we have improved on this at the torpedo station by balancing the turbine and increasing the speed and efficiency about 10 per cent more—at least we hope to do it when we get to making them regularly.

Mr. ROBERTS. How much of an increase of speed do they get by the turbines over the Brotherhood engine—that is, how much per diameter?

Admiral MASON. About 3 knots on a range of 3,500 yards. There are reports of a Whitehead equal to the Bliss-Leavitt in performance.

Mr. ROBERTS. I understood you to say that by using the turbines they got increased speed and greater range of action?

Admiral MASON. They get a greater range—that is, the same amount of air will last longer with the turbine. What I mean is that the efficiency of the torpedo is increased.

Mr. ROBERTS. It keeps up its speed and runs farther with the turbine engine than with the Brotherhood engine?

Admiral MASON. Yes. It has less weight, and the air has a more efficient action. The turbine also possesses the advantage of simplicity over the reciprocating engine.

Mr. ROBERTS. By the improvements you have made at the torpedo station you get 10 per cent increase in speed, or range, or both?

Admiral MASON. In range at the same speed and in speed at the same range.

Mr. ROBERTS. What speed do these torpedoes make now? Take the 21-inch; what speed do they make?

Admiral MASON. The contract speed is 26 knots for 3,500 yards. The Bliss company has not been able to do it yet, but obtain 27 knots for 3,000 yards. The other torpedo I spoke of, the 5-meter 18-inch torpedo which we use in armored cruisers and destroyers, the contract speed is 29 knots for 2,000 yards.

Mr. ROBERTS. More speed, but a shorter range?

Admiral MASON. A shorter range, of course. You put on more power and use up the air quicker. The torpedo carries its own motive power.

Mr. ROBERTS. Three thousand yards is nearly a mile and a half.

Admiral MASON. The other torpedo has a speed of 35 knots with a 1,200-yards range.

Mr. ROBERTS. Thirty-five knots at 1,200 yards?

Admiral MASON. Yes.

Mr. ROBERTS. That is over a half a mile.

Mr. KITCHIN. Do you know whether they had at Newport three years and a half ago these various kinds of torpedoes?

Admiral MASON. I am sure that you did not see any of the turbine torpedoes, because the first ones have just been completed.

Mr. KITCHIN. So that this \$7,000 torpedo is a new one?

Admiral MASON. That is a new one.

Mr. ROBERTS. That is the 21-inch?

Admiral MASON. Yes, sir. That contract was just being made when I became chief of the Bureau of Ordnance.

The CHAIRMAN. This whole matter could go over for the year—that is, the matter of building the torpedo factory?

Admiral MASON. No, sir; I think the torpedo question is even more important than the question of reserve ammunition and reserve guns. The torpedo question went over last year and has been passed over year by year for several years. We are now unable to supply torpedoes for even our small number of torpedo vessels, and when I consider the possible consequences I can not describe our condition in regard to torpedoes as anything but deplorable. It is an absolute necessity, if we are to be prepared for war, to get torpedoes, for if our torpedo boats can only make one attack (and all of them can not do that now), they will become useless as fighting machines soon after the opening of war. The effect of procrastination in preparation for war has recently been so conspicuously shown that we who are especially charged with the preparation of the Navy feel that it is our duty to impress that branch of the Government which allots the

money with the danger of such a policy. All our information indicates that other nations are not procrastinating. Great Britain, France, Japan, and Russia have government torpedo factories; Germany has one so much under government control as to be practically a government factory, while the Whitehead Company, at its two factories, in Austria and England, is turning out over 1,000 torpedoes a year, most of which go to these larger powers. Our only source of supply is one company that manufactures torpedoes as a secondary product, with a capacity of 100 per year and whose work is not altogether satisfactory. In my opinion the situation is fraught with danger, and I think that we can not get to work too soon to provide the means to supply our needs.

The CHAIRMAN. Why did you not get this first, then, if it was more important than the reserve-powder business?

Admiral MASON. There are several reasons. First, we did not realize it before the situation was upon us as we do now, and, secondly, we had not developed the torpedo as we have now, and therefore were not prepared to ask to be allowed to go ahead and build torpedoes. The experience of the past year, however, has been convincing that, as far as ingenuity and workmanship are concerned, we can produce good torpedoes, and we ask the Congress to give us the tools to work with.

Mr. ROBERTS. Which, in your judgment, is the more desirable torpedo, the 18-inch torpedo with the higher speed at 2,000-yard range or the 21-inch with its lower speed and 3,500-yard range? Which of those two would you think the more desirable torpedo?

Admiral MASON. We have different uses for the different torpedoes.

The conditions under which the heavy ship will presumably use her torpedoes are essentially different from those under which torpedo craft are designed to work. Battle-ship action will presumably take place in the daytime, torpedo-boat attacks at night. Generally speaking, the difference between battle-ship tactics and torpedo-boat tactics is that the battle ship aims to keep and kill the enemy at a distance and the torpedo boat aims to get as close as possible in order to kill. The torpedo from a battle ship is fired when reasonable accuracy in estimation of the enemy's course and speed obtains so that it is not so necessary to provide means for overcoming the effect of errors in this estimation as it is on a torpedo boat working in the dark where it is necessary to nullify with a high speed unavoidable errors in estimation. The range of visibility also on a good torpedo boat is limited at night to about 1,200 yards, so that would seem a good arbitrary distance to fix for the range of the torpedo and take advantage of the high speed possible.

Mr. ROBERTS. So that you want to continue to have both types of torpedoes?

Admiral MASON. Yes.

Mr. ROBERTS. Can the 21-inch long-range torpedo be keyed up to the higher speed for a short range? You spoke of a range of a thousand yards.

Admiral MASON. That we have not tried, but it is reasonable to suppose that it can.

Mr. ROBERTS. You have not experimented with that?

Admiral MASON. No. That is why we want a torpedo factory of

our own, so that we will not be in the hands of any one company which will not make experiments along certain lines which do not suit their business.

Mr. BUTLER. Who invented this torpedo that you speak of?

Admiral MASON. The Bliss-Leavitt torpedo?

Mr. BUTLER. Yes.

Admiral MASON. That is the invention of Mr. Leavitt. I think he is one of the firm now of the E. W. Bliss Company.

Mr. BUTLER. Is he a civilian?

Admiral MASON. Yes.

Mr. BUTLER. He never belonged to the Navy?

Admiral MASON. No, sir; but he has been in the business ever since he was a young man.

Mr. BUTLER. Our naval officers do not develop any inventions, do they?

Admiral MASON. Yes; they often do. We have an inventor, Lieutenant-Commander Davison, an officer at the torpedo station, who has invented this balanced turbine. This is so valuable that the Bureau has directed him to take out a patent on it, the Government paying all expenses, the patent, of course, being assigned to the Government.

Mr. ROBERTS. Are not some of these appliances for the sighting of guns the inventions of naval officers?

Admiral MASON. All of them are. They are inventions of officers in their line of work.

Mr. ROBERTS. Some of these improvements they are the real inventors of?

Admiral MASON. Yes.

The CHAIRMAN. The next is, "Torpedo station, Newport, Rhode Island, seventy thousand dollars." There is an increase for "new smokestack and flues for boilers" of \$5,000.

Admiral MASON. They have gradually increased at that station. They started in with one boiler, and now, I think, they have four. The original stack is too small for the work. I think my previous statement covers all that.

The CHAIRMAN. Could you not repair it? If you were allowed \$65,000, as you were last year, could you not do that?

Admiral MASON. Not very well.

The CHAIRMAN. The next is, "Arming and equipping naval militia." That is the same as last year?

Admiral MASON. Yes.

Mr. ROBERTS. On that point were there any suggestions made by the naval militia to increase that amount?

Admiral MASON. Not that I know of. This appropriation is handled by the Assistant Secretary. It is only turned over to the Bureau of Ordnance to keep the run of it, that is all. We take cognizance, but we never make an expenditure without direction.

Mr. ROBERTS. You would not know of any suggestions from the naval militia for an increase?

Admiral MASON. I would not. I called Secretary Bonaparte's attention to it, and asked if Mr. Newberry had made any suggestions about increases, and I have received none.

The CHAIRMAN. The next is, "Repairs, Bureau of Ordnance." What is that for?

Admiral MASON. "For necessary repairs to ordnance buildings, magazines, gun parks, boats, lighters, wharves, machinery, and other items of a like character, \$50,000."

For a number of years the Bureau only received \$15,000 per annum under this head, but in 1892 it was increased to \$30,000, and that sum has been appropriated each year since. In the Bureau's last estimates it asked for \$50,000, but the Department reduced it to \$40,000 and Congress appropriated only \$30,000.

Owing to the increase in public work under this Bureau, it is believed to be necessary to have a sufficient fund at its disposal for immediate repairs to buildings, etc., instead of waiting for special appropriations by Congress for the purpose, as has been the case on several occasions, buildings and other public works already damaged being neglected for a long time until money was available for repairs, the delay increasing the cost owing to deterioration. This is especially urgent in the case of magazine buildings injured by explosions. The increase in this appropriation is very necessary.

The CHAIRMAN. The next is, "Miscellaneous, Bureau of Ordnance." You have cut that down \$5,000.

Admiral MASON. "Contingent, Bureau of Ordnance, \$20,000."

This appropriation for a number of years was comparatively small, but as the Navy increased in size the amount asked for and appropriated had to be increased, until the year 1902, when this Bureau received \$75,000, and that sum was appropriated each year until 1906, when, owing to the fact that all expenses for freight were transferred to the Bureau of Supplies and Accounts, this Bureau only required \$25,000. It is now thought that about \$20,000 will suffice, and that amount has been asked for.

This being entirely a contingent appropriation, the Bureau has not attempted to estimate probable expenditures for each separate item.

The CHAIRMAN. Under the next item, "Civil establishment, Bureau of Ordnance," you are asking for an increase in the pay of the ordnance clerk at the New York Navy-Yard; for a new clerk at the naval magazine, Iona Island, New York, at \$1,000, and also for a clerk at the naval magazine, Fort Mifflin, Pa., at \$1,000.

Admiral MASON. The following is a detailed statement explaining the increases and the necessity for the new positions under this appropriation:

CIVIL ESTABLISHMENT.

Navy-yard, New York: Increase of pay of chief clerk from \$1,400 to \$1,500. This position now pays \$1,400 per annum, and the Bureau has asked to have it increased to \$1,500 per annum. The duties are very important, exacting, and constantly increasing. The ordnance department of this yard is the most important one on the Atlantic coast, thousands of dollars' worth of stores being handled and accounted for annually.

The Bureau believes that the salary now paid is inadequate for the services required and should be increased.

Naval magazine, Iona Island, New York: The Bureau has estimated for one clerk at \$1,000 per annum.

There are now employed at this magazine four clerks, one at \$3.52 per diem, and three at \$2.48 per diem.

This magazine is the principal one on the east coast, and it supplies a great deal of the ammunition for vessels fitting out at eastern navy-yards, more than any other single magazine, and the clerical work has been steadily increasing with the growth of the Navy. It has been found that the clerical force is inadequate, and the Bureau has therefore recommended the additional clerk, who is urgently needed.

Naval magazine, Fort Mifflin, Pa.: One clerk at \$1,000 per annum.

The amount of clerical work at this magazine makes it necessary that there should be a clerk permanently attached thereto, the one now employed at \$3.28 per diem being a temporary appointment, and the transfer to the permanent roll would be at a reduction of \$26.64 per annum.

Naval Gun Factory, navy-yard, Washington, D. C.: The Bureau has asked for an increase in the pay of the chief clerk of the Naval Gun Factory from \$1,600 to \$1,800.

The present compensation is inadequate and not proportionate to the responsibilities and duties required of the position. The position requires such competency as would make the incumbent more of a "civilian assistant" to the superintendent than a clerk. The present pay of \$1,600 per annum was established in 1886. The force of employees in the gun factory at that time was 320, office force 7. Force at present 3,864, office force 78, exclusive of draftsmen. The present incumbent was appointed six years ago, and has had no increase since, although recommendations have been made from year to year for an increase to \$2,000 per annum.

Since the superintendent of the gun factory was made commandant of the navy-yard also the responsibility of the chief clerk has materially increased.

The gun factory is a very large establishment, comparable with the Government Printing Office, or the Bureau of Engraving and Printing, and a glance at the salary lists of those places will at once show the inadequate sum paid to the chief clerk of the gun factory.

Navy-yard, Norfolk, Va.: The Bureau has asked for an increase in the pay of the chief clerk of the Ordnance Department from \$1,200 to \$1,300. The Bureau is of the opinion that the compensation now paid is inadequate to the responsibilities of the position and the services rendered. In the past few years the work in the office has increased, at a very conservative estimate, at least 200 per cent, consequently increasing the duties and responsibilities.

Naval magazine, St. Juliens Creek, Virginia: The Bureau has estimated for one clerk at \$1,000 per annum.

The services of a clerk are absolutely necessary to relieve the inspector of ordnance from such work and allow that officer more time for important duties in the field.

The magazine is now a separate institution, employing over 90 men, and during the fiscal year just ended expended in labor over \$1,400,000, involving a vast amount of clerical work and correspondence.

There are now employed at this magazine two clerks at \$2.80 per diem and one at \$2.48 per diem.

Naval magazine, Mare Island, California: The Bureau has estimated for one clerk at \$1,000 per annum.

The clerical force at this magazine is totally inadequate, there being only two clerks, one at \$3.28 and one at \$2.48 per diem, employed. It has been found absolutely impossible with this force to keep up the routine work, which has been accomplished only by the clerks working over hours, after voluntarily taking their work home with them.

This magazine has the preparation and handling of practically all of the ammunition for the west coast, and also for the Asiatic Station, and the Bureau is of the opinion that it should be properly equipped with clerks.

Navy-yard, Puget Sound, Washington: The Bureau has estimated for one clerk at \$1,000 per annum.

The clerical work in the ordnance department of the yard is performed by a special laborer (clerk) who receives \$3.28 per diem.

Additional clerical work will be necessitated by work of clearing, grading, building wharves, magazines, etc., on the 250 acres of land purchased for magazine purposes, as well as for the increasing ordnance work in the navy-yard. It is therefore requested that one clerk, at \$1,000 per annum, be allowed to act as chief clerk in this department, instead of the special laborer at \$3.28 per diem.

Naval station, Philippine Islands: The Bureau has estimated for one clerk at \$1,400 per annum and one at \$1,200 per annum. These two clerks are now carried on the labor roll under appropriation "Ordnance and ordnance stores" at \$4.48 and \$4 per diem, respectively, but it is thought better that they be carried under the regular appropriation "Civil establishment," and as a matter of fact the transfer to that appropriation will be a slight reduction in salary.

The CHAIRMAN. What do you say about these two clerks, at Iona Island and Fort Mifflin?

Admiral MASON. At the navy-yard, New York, there is an increase in the pay of the chief clerk from \$1,400 to \$1,500. This is one of the most important yards that we have and the chief clerk in ordnance is only getting \$1,400. He is an excellent man, and the place is worth \$1,500. We asked for \$1,600, but the Secretary cut it down to \$1,500.

Mr. LOUDENSLAGER. Is that more important than the Washington yard?

Admiral MASON. No, sir. The chief clerk of the Washington navy-yard is the most important one. You will find a recommendation for him also.

The CHAIRMAN. Are these clerks now employed?

Admiral MASON. The clerk at the New York yard is, and also at Fort Mifflin, but Iona Island is a new place. At Fort Mifflin, as stated before, it is a change from per diem to per annum, at a slight reduction in salary, but the transfer would put the man on a better footing.

Mr. ROBERTS. The clerk at Iona Island is not.

The CHAIRMAN. These new clerks, are they employed under the present appropriation?

Admiral MASON. At Iona Island the place asked for is a new one; an increase in force. At magazines we have per diem men, but it is advisable to put them on the civil establishment list when we can.

Mr. ROBERTS. The \$1,000 clerk at the naval magazine, Iona Island, is entirely new?

Admiral MASON. Yes.

Mr. KITCHIN. No; he is really on the per diem basis now.

Admiral MASON. The per diem people will be laid off or taken on as the work goes. They are paid out of appropriation "Ordnance and ordnance stores," or "Armor and armament." But here is a big magazine (Fort Mifflin), and we want to have a clerk there regularly, and that should come under the "Civil establishment."

The CHAIRMAN. You have the same provision in regard to Norfolk, Va., and Mare Island, Cal.?

Admiral MASON. We have asked for an increase of \$100 in the pay of the chief clerk in the ordnance department at the Norfolk Navy-Yard, and for an additional clerk at \$1,000 per annum for the naval magazine, St. Juliens Creek, Virginia, and also for an additional clerk at \$1,000 for the naval magazine at Mare Island, Cal.

The CHAIRMAN. We come now to the navy-yard, Puget Sound, and the naval station at Cavite P. I. Is that the same arrangement there, also? They are per diem men, and would like to get on the annual clerical roll?

Admiral MASON. Yes. There is a special laborer at the navy-yard at Puget Sound who receives \$3.28 per diem. He wants to get on the per annum roll.

In the Philippines, at the naval station, these fellows are on a per diem, and they go onto the annual roll.

Mr. KITCHIN. It is understood when these men go on the regular roll that their per diem employment ceases, and we will save something along the line?

Admiral MASON. We will save something, the transfer to the per annum roll being at a slight reduction of pay. There are some new men, however. They are all necessary.

Mr. ROBERTS. Was there any recommendation in regard to the writer at the Boston Navy-Yard, that he be rated as a clerk? Did any such recommendation come to your Bureau?

Admiral MASON. The Bureau recommended to the Secretary an increase in the pay of the chief clerk at Boston, after the estimates were submitted, but the Secretary did not forward the recommendation to Congress.

The CHAIRMAN. Now we pass to page 104. The first provision is for three brick magazine buildings, each 75 feet by 40 feet, at Dover, N. J.

Admiral MASON. That is under "Public works, Bureau of Ordnance?"

The CHAIRMAN. Yes.

Admiral MASON. I will here submit the following explanation concerning the estimates for public works under the Bureau:

PUBLIC WORKS, BUREAU OF ORDNANCE.

Naval powder depot, Dover, N. J.:

Three brick magazine buildings, each 75 by 40 feet, to be known as magazines Nos. 6, 7, and 8, with the necessary railroad tracks to connect with the present system-----	\$33, 000
Removing brush, clearing grounds, and overhauling railroad tracks and roads-----	3, 000
Total -----	36, 000

The Bureau in its last estimates asked for the same amount for these magazines, and for \$3,000 for removing brush, etc., but these items were disallowed by Congress.

While this depot is in generally satisfactory condition, the buildings, etc., above mentioned are an absolute necessity, as it is the main storehouse for the reserve ammunition of the Navy, and its full development is imperative.

Naval magazine, St. Julians Creek, Virginia:

One brick magazine building, 50 by 100 feet-----	\$14, 000
--	-----------

There being no naval magazine of any capacity south of Norfolk, the importance of this one is evident. The additional magazine building is required to meet the demands for more storage space for powder, the conditions at this time being congested and ammunition stored under temporary sheds without either lock or key.

It is hoped that the addition of this one magazine building will be adequate to meet demands at this magazine for some years.

Fencing newly acquired land-----	\$4, 450
----------------------------------	----------

The purchase of additional land out of funds available from an old appropriation has been authorized by the Department, and fencing is necessary in order to secure the protection for which the land was acquired.

This consists of about 1,000 feet corrugated-iron fencing 8 feet high complete—galvanized iron. The remaining part of this magazine is already furnished with this fence as a protection from fire from near-by woods, underbrush, grass, etc., \$3.45 per foot.

Installing electric lights, heaters for filling houses, and motor for reforming plant -----	\$15, 300
---	-----------

The items above mentioned are necessary for the proper equipment of the magazine, it being considered especially desirable and economical to have reforming plants at the larger magazines. This also includes the necessary wiring and conduits to carry the power from the Norfolk yard to the magazine, a distance of 3 or 4 miles.

Naval proving ground, Indian Head, Maryland.

Shell and mount storehouse, including 20-ton traveling crane and 5-ton auxiliary hoist ----- \$20,500

The necessity for the shell and mount storehouse can not be too strongly urged. Guns, gun carriages, and armor-piercing shell when they arrive are left entirely exposed to the weather, and this exposure may endure for months and even years. In the case of the mechanisms of guns and mounts the result is that they suffer serious and costly deterioration. As regards the shell, quite recently the Bureau was compelled to condemn as scrap 28 6-inch shell, costing \$1,120, that had been so long exposed to sun and frost as to render them useless. The Bureau is informed that it costs from \$25 to \$35 to clean up and put in order at the navy-yard each gun and mount that arrives there after proof. In the course of a year this expense will foot up to a large fraction of the cost of a proper storehouse.

Paving battery ground----- \$13,500

This item was asked for last year, but the Department disallowed it.

Experience in the last three years has more and more demonstrated the necessity and economy of having this work done for a number of reasons, the most important of which is that a large amount of experimental work requires, in the development of powders, the determination of the quantity of smoke, whether unburned powder is blown from the gun, etc., and while every effort was made by wetting down the ground, etc., to attain these results, the experiments were invariably vitiated by the character of the ground in front of the gun, raising a dust which mixed with the smoke and preventing entirely the finding of the grains blown from the gun. Furthermore, it is made ground, of clay and gravel, which is invariably dragged into the bombproof and powder rooms, creating danger and dirt; it is dragged on the battery and causes fouling of mechanisms. The velocity screens are suspended over this portion of the ground and have to be manipulated by the men, which requires them to walk around on this ground and handle cables and wires, wire, and, in all, these features introduce errors in ballistic and experimental work and consequently vitiate the value of the experiment, which naturally is a loss of money.

Expect to use composite blocks.

Laboratory annex----- \$5,000

The laboratory here was designed to accommodate four men working at chemical tests and determinations. The work has grown so that eleven laboratorians are kept busy in the one building, and the space is totally inadequate. The number of tests and determinations has grown to be very great, very much of the work being due to the fact that the German heat test has been added to the standard K. I. test, but a large part is also due to the great number of indices of powder now in existence that are constantly calling for chemical retest.

The proposed building would be adequate if built of simple wooden framing with corrugated steel sides and roof, and sheathed on the inside with paper and sheet iron. Size of building, 30 by 40 feet, with sides 12 feet high, built with a 7-foot basement for storing samples, etc. The building itself would cost \$3,500; fittings \$1,000, and would be principally devoted to heat tests other than K. I. This building would be erected about 100 yards southeast of the laboratory.

Nitrate of soda storehouse, to replace building destroyed by fire----- \$4,500

This is an all-steel shed with cement floor, built on the principle of a railroad sand shed. To store 1,000,000 pounds of soda the shed would have to be 100 feet long by 20 feet wide inside. The soda can be piled loose on the floor, and, there being absolutely nothing in the building, such as bagging, wood framing, etc., loss by fire will be impossible.

Ether vault and tank----- \$1,380

The original vault was built for the storage of ether incident to a production of powder amounting to 1,000 pounds per day. The plant has grown to a 4,000-pound plant and the two ether tanks are inadequate. With the present arrangement a considerable loss of ether results in the following way:

One tank is used as a receiving tank and the other is used to draw from. The delivery tank is, of course, under air pressure, and when the receiving tank is full we must shift the offices of these two tanks. This entails blowing

off the ether-laden air in the delivering tank before it can be used as a receiver, and as this occurs eight or ten times a month the loss of ether is considerable and costly.

The above estimate calls for a single tank located in a 13-inch walled brick vault, arched over as shown in the plan.

Pyro storehouse----- \$850

To be located on line of narrow-gauge track, midway between pulping house and dehydrating house. A plain, galvanized-iron house, wooden framing, 16 by 30 by 8 feet high. This house is intended to avoid the storing of large amounts of finished pyro in the working room of the dehydrating house, where, if it remains for any length of time it is liable to be contaminated by dust, dirt, etc. It often becomes necessary to accumulate a stock of pyro ahead, in order to make repairs to nitrating plant without stopping whole factory.

Completion of bombproof for velocity battery----- \$900

This work was begun two years ago but given up for want of funds. At present it is in an unfinished state and very unsightly, and practically prevents the use of the velocity battery should it be desirable to take advantage of the new butt on the north side of the valley.

Clearing underbrush, care of grounds, and preservation of permanent way of railroad track----- \$6,500

Naval magazine, Fort Mifflin, Pa.:

(1) Repairs to wharf and railroad track----- \$10,000

Further repairs are needed to the wharf and railroad tracks, which are carried on trestles, and the Bureau believes the sum asked for will be necessary to perform the work properly.

Appropriation "Repairs, ordnance," not sufficient for all of this work.

(2) Installation of drainage system for 5 dwellings, to discharge into river at low-water mark----- \$7,500

It is absolutely necessary for the proper sanitary conditions of the five dwelling houses that a system of drainage to discharge into the river at low-water mark be installed.

(3) Completion of stone road through reservation----- \$2,400

This contemplates the completion of the present road to the junction with Fort Mifflin lane, a distance of about 550 feet. The continuation of this road to the point named is very necessary, in order to facilitate the transportation of heavy freight, the road being very bad, especially in wet and snowy weather.

(4) One building of corrugated steel construction, 18 by 32 feet, for use of workmen ----- \$1,200

This is to replace a condemned wooden structure now used by the workmen for shelter and when at meals, no other building being available for the purpose.

This is for the workmen to stow their clothes when preparing for magazine work, for shelter at meals, etc.

(5) Fence to inclose property recently acquired from the War Department ----- \$6,000

The acreage at this magazine has recently been extended by the addition of land acquired from the War Department. The main essential in securing this additional land was to protect against trespassers, and especially against the danger of fire, due to such persons. The station is, in a way, isolated, and much of the land is attractive to gunners. The Bureau believes the sum asked for is absolutely necessary.

Estimated cost, about \$0.82 per foot.

Frost wedge lock spring wire fence. Twelve wires with vertical connecting wires each foot and iron posts were necessary on account of gunners, cattle, etc., to continue present fence.

Naval magazine, New England coast:

Toward the erection of the necessary buildings on ground, the purchase of which is now under negotiation, as authorized by the act approved April 27, 1904, for a new naval magazine on the New England coast; also, toward inclosing said grounds, grading and filling in, building roads and walks, improvement of the water front, necessary wharves and cranes, railroad tracks, and rolling stock for local service, fire and water service, and equipment of the establishment----- \$230,000

In the last naval bill, Congress appropriated \$200,000 for completing the purchase of land required for this site and for commencing the development of the property as a naval magazine.

Purchases of the different parcels of land comprising the entire site are now proceeding, and of the total property about 82 acres have been acquired to date.

Building operations will be commenced, as soon as the titles are acquired, and the appropriation of \$230,000, completing the limit of cost prescribed by Congress in the naval bill of June 30, 1905, is necessary to establish the magazine at the earliest practicable date.

Total valuation by Government appraisers-----	\$146,000
Paid to date November 11, 1906-----	24,340

To complete payments-----	121,660
---------------------------	---------

Number of acres, 720; estimated price per acre, \$202.

Naval magazine, Mare Island, Cal.:

Toward additional magazine and storage facilities, quarters for gunners, fencing, extension of wharf, fire mains, lighting, telephone and railroad systems, and equipment pertaining thereto, on plans to be hereafter determined upon at the naval magazine, Mare Island, Cal.----- \$100,000

The details of the different items required under this head are estimated to be approximately as follows:

Two magazine buildings, 30 by 80 feet-----	\$18,250
On gun-cotton magazine, 25 by 40 feet-----	3,290
One steel storage shed-----	25,000
One paint and oil mixing house-----	2,400
Two additional houses for gunners-----	11,500
Extend north end of wharf 100 by 50 feet, and the north side 216 by 50 feet, erect freight shed on same, and rearrange railroad tracks to suit wharf enlargement-----	26,000
Extension of fire mains to afford protection to all buildings under construction and estimated for-----	2,750
Extend lighting and telephone systems to buildings under construction and estimated for-----	1,500
Extend railroad tracks to new magazine under construction-----	3,850
Extend fence to inclose grounds-----	500
Contingencies-----	4,960
Total-----	100,000

Owing to the congested condition of the magazines at this station the War and Navy Departments jointly approved the transfer to the Army in April last of a large quantity of brown powder (650,000 pounds) which it was absolutely necessary to dispose of for lack of storage space.

The conditions at this magazine are still very much congested, and the Bureau has included the above sum in its estimates to be used for necessary improvements. These estimates are recommended because of the certainty that this magazine must continue to be for many years the important powder depot on the west coast, at which the greater part of the ammunition for the Asiatic fleet will be held for shipment, and therefore the necessity of providing adequate means of meeting these requirements.

Naval magazine, Iona Island, New York:

(1) Extension to locomotive house to hold No. 2 compressed-air locomotive-----	\$800
--	-------

The present locomotive house holds but one locomotive. A second locomotive has been received the past year, for which a shelter is urgently needed.

By building alongside the old locomotive house and by using old material a place to protect the new locomotive can be provided for amount estimated. At present the new locomotive is kept under a temporary shed. Proper housing capacity for the two locomotives in daily use is necessary and should be provided.

(2) Installing fire protection, standpipes, and nozzles in storehouse

No. 1----- \$1,050

The storehouses are fireproof buildings in which are stored large quantities of material, pine ammunition boxes, paper bags, excelsior, distance pieces, etc. Storehouse No. 2 was fitted with a complete system of standpipes, with dirigible nozzles (without hose), by which every point of the building can be reached by two fire streams by pointing nozzles and opening valves at each nozzle. This makes a very complete method of extinguishing fires at the beginning and is a cheap insurance.

It is desired to equip storehouse No. 1 with the same system.

(3) Two additional magazine buildings, standard construction, with

grading of sites----- \$30,000

Additional magazine floor space is absolutely needed. There are six magazines, one of which is used exclusively for black powder, and two compartments of another can not be used for explosives on account of overlapping. In the four and one-half magazines available for smokeless powder over 3,000,000 pounds of smokeless powder in bulk and in charges are stored. The buildings are crowded, and much inconvenience is caused by lack of floor space to sort out lots and indices of powder. The natural growth of the Navy will increase the amount, and as time will be required to prepare sites and erect magazines, three additional magazines should be authorized and work commenced as soon as practicable.

(4) Three filling houses, with steam heating----- \$3,000

The importance of a sufficient number of working places for small parties at a magazine can not be overestimated, as work under existing regulations can only be done away from magazines in filling houses or platforms, by small groups of workmen.

At this magazine there is but one filling house heated with steam, and that is really the only place approaching the regulation temperature of 70°. There are two other filling houses partly heated by electric heaters, which during cold weather are but little above the freezing point. There are two open platforms recently installed and others under construction which are used in summer to good advantage for loading shell and breaking down ammunition. A shipping house is also used when wharf work does not prevent.

In summer, therefore, there are six working places, and in winter one properly heated filling house and two others partly heated, making three in all, available for use at all times. This number of working places is not sufficient for current work in time of peace. In time of war twice or three times that number would be urgently needed.

(5) One double cottage for gunner and pharmacist----- \$13,000

It is very desirable that the chief gunner should reside at the magazine in order that his services may be available in starting work in the morning, and outside office hours. The inspector of ordnance now occupies the house intended for chief gunner, as being the only quarters available. This necessitates the chief gunner obtaining quarters outside at the nearest point where quarters are obtainable, at Haverstraw, N. Y., 9 miles from the magazine. Another commissioned officer should reside on the magazine grounds. His services are necessary both for the progress of work and also in case of emergency.

The pharmacist stationed at the magazine takes the place of a medical officer, as there is no physician nearer than several miles. As his services are urgently needed in case of accidents which may happen at any hour, he should be furnished quarters on Iona Island.

As there are no quarters for his use, he is at present required to occupy one-half of one of the cottages built for employees.

Proper quarters for pharmacist should be provided. The site at Iona Island is a thinly settled part of New York State, away from villages or towns, making it extraordinarily inconvenient for officers on duty unless quarters are provided.

(6) Extension of railroad tracks and new sidings----- \$6,000

Buildings, magazines, and filling houses are now located directly on main tracks, with but few sidings. Cars placed for work near these buildings block the tracks, necessitating much loss of time both to working parties and in hauling cars.

There are parts of the island not utilized now which could be made of great value by extending railroad tracks away from crowded portion. In case new magazines and new filling houses are built, the extensions of the railroad track would be valuable both for construction purposes and for current use after buildings are erected.

The additional railway tracks should be laid in advance of building operations to get the full benefit.

(7) Building for marine quarters and guardhouse----- \$10,000

A building and a guardhouse for a marine guard of 24 to 36 privates should be erected near the main gate. The present marine guard of 11 men, sufficient to maintain two posts, a sentry at the gate, and a patrol, as there are no other quarters occupy one-half of cottage No. 4, designed for employees. They are much crowded and should have a properly designed building.

(8) One heat-test house, plan 20147/1----- \$1,000

A small building, heated by steam, for drying samples of smokeless powder for heat test, arranged for use as a testing room and drying room, should be provided, as handling the large number of samples required to be tested should be performed in an isolated building. At present this work is done in the upper story or garret of the office building, and the drying of samples is carried on in the dynamo room as the only place available. A separate house for this work is very necessary where so much depends on the proper testing of the powder.

(9) Water-closets and wash rooms at power house----- \$4,000

There are no water-closets or wash rooms at this magazine for the use of workmen, except several small portable earth closets installed within the last year.

A proper water-closet and wash room should be installed at or near the power house, where the 125 workmen assemble for dinner and muster, in the interests of health and decency.

(10) Extending sewers ----- \$500

Two sewers emptying on the flat in cove abreast the power house should be extended 140 feet to edge of channel and the flat filled in gradually by using it as a dump. At present the flat at low water is offensive and unsanitary.

(11) Primer house ----- \$600

A small primer house of corrugated iron is much needed to stow large quantities of primers and fuses kept in stock. There is no primer house at present, except an old water-closet, used for the purpose in the absence of any other building.

Naval magazine, Puget Sound.

For necessary buildings; water and fire system; fencing, clearing, and grading; railroad tracks, and equipment of the naval magazine, Puget Sound, on ground recently acquired for the purpose----- \$153,000

The following items are embraced in this estimate:

One gun-cotton house-----	\$2,400
Four magazine buildings-----	28,000
One shell house-----	17,000
One magazine for suspected powder-----	3,800
One gunners' quarters-----	4,400
One stable-----	1,500
One house for watchman-----	4,500
Two filling houses-----	1,600
One administration building-----	9,000
One fuse house-----	2,400
One primer house-----	2,400
One storehouse-----	19,000
One workshop-----	3,000

One reservoir and tank-----	\$24, 000
Railroad system-----	15, 000
Water and fire system-----	5, 000
Clearing and grading-----	10, 000
Total -----	153, 000

During the fiscal year a survey of this magazine site, purchased under the appropriation carried in the naval bill of July 1, 1902, has been made and topographical map completed; also plan looking to the laying out and development of the grounds, and specifications and plans for wharf and two magazine buildings have been made and the contract let for the wharf. Steps have been taken for clearing and grading such portions of the site as are necessary and can be done within the limits of the appropriation.

The necessity for increased magazine facilities on the Pacific coast of the United States is urgent, inasmuch as with the accumulation of a reserve supply of ammunition it will be a matter of policy to keep in store on the west coast such a supply as would be expected to meet the demands of a fleet operating in the Pacific Ocean. The storage facilities on the west coast at present are inadequate at Mare Island, and that is the only magazine on the coast. The appropriation carried in the naval bill referred to (July 1, 1902) is barely more than sufficient to provide for the purchase of land and portion of the clearing and grading, and the necessary wharf at Ostrich Bay, and the amount asked for is urgently recommended to be favorably considered.

Naval magazine, Philippine Islands.

For further extension of magazine at Philippine Islands, including clearing and grading, extension of railroad track, new buildings, fire system and necessary equipment----- \$40, 000

During the last fiscal year work at this naval magazine, under the appropriation of July 1, 1904, has been progressing very satisfactorily. The necessary timber and pile pier 100 feet long, 12 feet wide at inside end and 24 feet at outer end, has been completed, and an industrial railway track from the pier end through graded portion of the magazine site has been laid.

Two magazine buildings and one shell house are nearing completion, and the mason work on another shell house has been completed to the height of the eave, awaiting the structural steel to be shipped from the United States.

Material for custodian's quarters has been ordered and for the most part delivered.

Out of the appropriation of \$50,000 carried by the act of July 1, 1904, it is expected to complete at this station two magazine buildings, two shell houses, two filling houses, one storehouse for high explosives, custodian's quarters, and quarters for necessary watchmen; also the pier and installation of the railway track. The buildings thus provided will not be sufficient for the purposes of a naval magazine, if the magazine at Cavite is abandoned, which, under the Department's present instructions, is the condition contemplated, and the Bureau has therefore included the above item of \$40,000 for the purpose of further extending the magazine at Olongapo, including clearing, grading, extension of railway tracks, new buildings, fire system, etc.

With this additional sum this magazine can be put on an efficient footing for immediate necessities.

Naval magazine, Guantnamo:

For necessary buildings and wharf, clearing, grading, and equipment of the naval magazine, Guantnamo----- \$52, 500

This estimate embraces approximately the following items:

Two magazine buildings-----	\$15, 000
One shellhouse-----	17, 000
Quarters for gunner-----	6, 000
Wharf, clearing, and grading-----	12, 000
Contingencies-----	2, 500
Total-----	52, 500

At this naval station there is as yet no ordnance department, and no work under the cognizance of this Bureau has been done there during the past fiscal year. The experience of the past fiscal year, however, has demonstrated the need of the items asked for in the Bureau's estimates.

Torpedo station, Newport, R. I.:

(1) Rebuild the oldest section of sea wall-----	\$5,000
(2) Ferry slips at torpedo station and Government landing-----	7,500
(3) Torpedo factory, with equipment of machine tools, engine, boilers, and necessary equipment-----	155,000
Total-----	167,500

Item 1: This section of the sea wall is undermined and the top of the wall is pushed over toward the sea. The wall is in such a condition that it is beyond the ability of the station force to repair permanently. Serious damage is inevitable unless the wall is rebuilt. This is a continuation of repairs to the sea wall.

Item 2: This is to provide an entrance for the ferryboat which has been authorized by the Department, and plans for which are now under consideration.

Item 3. This is to provide a Government factory whereby the Department will be placed in a more independent position than it at present occupies in regard to the manufacture of torpedoes. At present the Government is practically dependent on one firm alone in this country for its torpedoes—an unfortunate condition, because, under the circumstances, a firm which is the sole manufacturer of an article is in a position to dictate its own terms to the Government as well as to an individual. This inevitably causes delay in the delivery, and has a decided tendency to increase the price of the manufactured article.

Such a plant as the one recommended would not necessarily supersede the business of the private firm, but its output would materially help to supply the demand.

The estimated yearly output of this factory would be 50 torpedoes 5 m. 45 cm. and 40 torpedoes 5 m. 21 inches of latest improved type, or the modification of 300 older torpedoes 5 m. 45 cm. Mark 1 torpedoes.

The factory would employ about 175 skilled mechanics. The possession of a torpedo factory by the Government would be a constant spur and incentive to the private firm or firms and there could be no doubt that the character of the work of the firm or firms would be greatly improved. A control by the Government on the cost of torpedoes could be had, etc.

This is considered as absolutely necessary.

MR. LOUDENSLAGER. You are asking for about three-quarters of a million dollars increase over and above last year?

Admiral MASON. The reasons for it are all given here.

The CHAIRMAN. Could you make any suggestions as to cutting down?

Admiral MASON. No; I think everything submitted is very necessary.

The CHAIRMAN. Of course we are only appropriating for one year. Take the New England magazine. Would we need all of that for one year?

Admiral MASON. I should say for the coming year. Plans are being prepared now, and my idea is (the need of this magazine is so great) to enter as soon as the bill is passed into contracts for the grading and building.

The CHAIRMAN. You have not got those plans yet, have you?

Admiral MASON. No; but they can doubtless be prepared before the purchase of the property is completed.

The CHAIRMAN. You already have \$200,000.

Admiral MASON. The greater part of that—about \$110,000 to \$115,000, after the purchases are completed.

The CHAIRMAN. We want to give you the money as fast as you need it, but we do not want to give it to you any faster than you do need it.

Admiral MASON. I think we can use it all. I am going to Boston in the next two or three days, and I will be able to put in my testi-

mony, anyway, the information as to the actual necessity. You gave us \$200,000?

The CHAIRMAN. Yes.

Admiral MASON. The total amount to complete payments out of this appropriation will be about \$82,000, on Government appraisements, but some of these claims may be settled out of court at a slight increase of cost above the estimates. The total valuation of the Government appraisers was \$146,000, whereas the original valuation was about half of that.

Mr. ROBERTS. It was less than that. The board appointed, if you will recall, sent in a report to us that the land was worth about \$35,000, and could be, in their judgment, bought for \$70,000.

Admiral MASON. We have gone into the courts now for it. We have options on about one-fifth.

Mr. ROBERTS. These prices we are paying would be under condemnation proceedings?

Admiral MASON. Under condemnation proceedings where necessary; otherwise by regular purchase. There are about 720 acres, at an approximate cost of \$202 an acre. That leaves us about 80 acres to start with. I will put in my hearing, or, if not, communicate immediately with you as to what we can expend.

NOTE.—Having since visited the Boston Navy-Yard and looked over the preliminary plans now under construction, I am of the opinion that this item of \$230,000 can be reduced to \$130,000 this year, provided that the appropriation of the remaining \$100,000 can be counted on for the next fiscal year.

Contracts could be let for the whole amount as soon as this bill is passed, but it is not absolutely necessary to do so. The work, however, is being laid out on the assumption that the entire sum of \$230,000 will be appropriated by the next session of Congress.

The CHAIRMAN. Take this naval magazine at Mare Island. I will just speak about these large items now. This is \$100,000.

Admiral MASON. That is itemized in this way. The total of the different items required under this head is estimated to be approximately as follows: "Two magazine buildings, \$18,250."

The CHAIRMAN. Yes; but I want to ask you on the general question, do you regard that as important this year?

Admiral MASON. Yes, sir. We are snowed up as regards stowage of ammunition, and the reserve we are accumulating necessitates more storage room.

There is one thing more, appropriation "Increase of the Navy." This is on page 192, "Armor and armament, nine million dollars." Congress appropriated under this head for the current fiscal year the sum of \$15,145,000. The balance on hand October 1 was \$9,540,611.87. A careful examination of the progress of work on vessels now under construction and authorized leads the Bureau to believe that the above sum will be required for the fiscal year 1907-8.

This estimate contemplates the expenditure of \$6,000,000 on vessels now under construction and \$3,000,000 toward the armor and armament of the battle ship authorized by the act of June 29, 1906.

The Bureau asked Congress for a deficiency of \$2,000,000 under "Armor and armament" at its last session, but this was not allowed. The Bureau was therefore obliged to cover this deficiency by drawing on funds for the current fiscal year, which amounted in round num-

bers to \$1,800,000 and reduced the working appropriation for the year to \$13,345,000.

It is now thought that this deficiency will probably not exceed the sum of \$1,000,000 at the end of the current fiscal year, and this sum the Bureau will ask for in one of the deficiency bills should circumstances so demand.

The above-mentioned deficiency is not really a deficiency, because that amount of ordnance material is already on hand under the appropriation "Armor and armament." That is, we have paid for it, and the apparent deficiency is not a deficiency because we have not money to pay for more. When the time comes we can wind up this appropriation, but now it must be a continuing one.

The above estimate is exclusive of ammunition and other supplies for new ships heretofore appropriated under "Armor and armament," and for the fiscal year 1907-8 the sum of \$750,000 will be required. This has been estimated for under "Ordnance and ordnance stores," and if not allowed under that head should be appropriated under "Armor and armament" in addition to the \$9,000,000 asked for. If allowed, it is requested that a clause be inserted providing that ammunition and other supplies already on hand, or contracted for under appropriation "Armor and armament," shall be thereby transferred to appropriation "Ordnance and ordnance stores" the same as if purchased under that appropriation.

Mr. KITCHIN. I notice you strike out the provisions of the proviso in the last bill under this item.

Admiral MASON. About shell?

Mr. KITCHIN. No; the provision that no part of this appropriation shall be expended for armor for vessels except upon contracts for such armor when awarded by the Secretary of the Navy, to the lowest responsible bidder, having in view the best results and most expeditious delivery.

Admiral MASON. I have no knowledge of that. I had nothing to do with the preparation of this bill.

Mr. KITCHIN. I wonder who can explain that to us. I want some information about that last letting of the contract.

The CHAIRMAN. It was put in by the House.

Mr. ROBERTS. Who struck that out?

The CHAIRMAN. These estimates come from the Department in this shape, without the proviso. The basis of our bill here is last year's law, and we put in all of last year's law, and also the estimates of the Department, and put them together, and those things that the Department does not send up here but which were in last year's law are put in the bill with a line drawn through.

Mr. KITCHIN. But does not the Department take last year's law?

The CHAIRMAN. No; they never do it. I wish you would put in your hearing, Admiral, a statement of that whole last armor contract, what the bids were, and all about it; what the conclusion of the Department was, and to whom the contract was let and how much was let to each one, and the reasons why the Department took the position that it did. We want that all put in the hearings. It will very likely be called for on the floor.

(The information asked for is hereto appended, marked "B.")

Admiral MASON. You have the report of the armor board now, have you not?

The CHAIRMAN. No; not yet. We would like to have that, also.

Admiral MASON. It is in the Printer's hands now, and should be ready very soon. It is a House document. I don't know the number, as the copy is with the Printer.

(At 1.45 o'clock p. m. the committee adjourned until to-morrow, Wednesday, December 12, 1906, at 10.30 o'clock a. m.)

APPENDIX A.—Table showing number and prices of armor-piercing shell of 5-inch caliber and above, purchased on requisition for the years 1903–1906, inclusive.

Year.	Requisition No.	Company.	Subject.	Price.
1903	166	Crucible	{600 10-inch	\$105.00
			{600 12-inch	158.00
	167	Carpenter	1,000 8-inch	62.50
	168	Midvale	1,000 5-inch	21.83
	170	Firth-Sterling	{200 8-inch	40.00
			{200 12-inch	150.00
	179	Bethlehem	2,000 6-inch	25.00
	180	Carpenter	2,000 7-inch	38.75
	261	Firth-Sterling	2,000 8-inch	62.50
	58	.....do	2,000 8-inch	62.50
1904	152	.....do	1,250 8-inch	55.00
			{750 8-inch	55.00
	186	.....do	{50 12-inch	160.00
	189	.....do	7,000 6-inch	25.00
	226	Bethlehem	1,000 6-inch	30.00
	227	Firth-Sterling	1,000 7-inch	45.00
	23	.....do	5 12-inch	170.00
	77	.....do	{300 10-inch	112.00
			{300 13-inch	220.00
			{100 12-inch	190.00
1905	197	.....do	1,000 7-inch	45.00
			1,000 5-inch	22.00
	254	.....do	1,000 7-inch	45.00
	257	.....do	500 5-inch	22.00
	69	.....do	{1,000 6-inch	25.00
			{350 7-inch	45.00
	132	.....do	1,000 7-inch	45.00
1906	133	.....do	1,000 8-inch	62.50
	252	.....do	200 13-inch	220.00

Contracts placed since July 1, 1906.

[After advertisement.]

Contract now with company for signature:

Firth-Sterling—

1,000 6-inch	\$25.00
1,000 7-inch	45.00
1,000 8-inch	62.50
1,000 12-inch	190.00

The following is an extract from the schedule of proposals for furnishing armor-piercing and target shell, which were opened in the Bureau of Ordnance at noon, December 19, 1906:

Armor-piercing shell—Price per shell.

	1,000 6-inch.	1,000 7-inch.	1,000 8-inch.	1,000 12-inch.
Firth-Sterling Steel Co.....	\$25.00	\$45.00	\$62.50	\$190.00
American and British Manufacturing Co.....	(a)	(a)	(a)	(a)
Bethlehem Steel Co.....	32.00	62.50	91.50	318.00
Midvale Steel Co.....	37 50	64.00	100.00	292.00

a No bid.

In each case the Firth-Sterling Steel Company offered the lowest price and shortest time for delivery.

Target shell—Price per shell.

	2 000 5-inch.	5,000 6-inch.	1 000 7-inch.	2,000 8-inch.	1,000 12-inch.
Firth-Sterling Steel Co	(a)	\$10.45	\$15.45	\$20.90	\$57.90
American and British Manufacturing Co.....	\$6.62	11.95	21.07	(a)	(a)
Bethlehem Steel Co	9.90	18.50	33.00	52.00	96.00
Midvale Steel Co	11.25	23.00	40.00	48.00	97.00

a No bid.

In each case, except that of the 5-inch target shell, the Firth-Sterling Steel Company offered the lowest price and shortest time for delivery. In the case of the 5-inch target shell the American and British Manufacturing Company, of Bridgeport, Conn., offered the lowest price and shortest time for delivery.

APPENDIX B.—Statement regarding the award of the last armor contracts.

Following the Navy Department's advertisement dated May 21, 1906, proposals were opened at noon, July 10, 1906, for furnishing about 7,388 tons of armor plates and appurtenances for vessels authorized by the act of Congress approved March 3, 1905, viz, battle ships No. 26 (*South Carolina*) and No. 27 (*Michigan*).

Bids were submitted by the three firms possessing armor plants as follows:

BETHLEHEM STEEL COMPANY.

Armor for the vessels authorized by the act of Congress approved March 3, 1905, viz, the battle ships *South Carolina* and *Michigan*.

Vessel.	Class A armor.	Price per ton.	Total.	Class B armor.	Price per ton.	Total.
	<i>Tons.</i>			<i>Tons.</i>		
For one battle ship No. 26.....	3,512	\$381	\$1,338,072	5	\$381	\$1,905
For one battle ship No. 27.....	3,512	381	1,338,072	5	381	1,905
Total.....	7,024	.....	2,676,144	10	.....	3,810

Vessel.	Class C armor.	Price per ton.	Total.	Bolts and nuts.	Price per ton.	Total.	Aggre- gate.
	<i>Tons.</i>			<i>Tons.</i>			
For one battle ship No. 26.....	147	\$381	\$56,007	30	\$360	\$10,800	\$1,406,784
For one battle ship No. 27.....	147	381	56,007	30	360	10,800	1,406,784
Total	294	.....	112,014	60	.....	21,600	2,813,568

Aggregate bid for armor for battle ships Nos. 26 and 27.

	Total tons.	Aggregate.
Armor	7,328	\$2,791,968
Bolts and nuts	60	21,600
Total.....	7,388	2,813,568

Deliveries of above armor will be commenced within five and one-half months after receipt of preliminary drawings, and continue at the rate of 600 tons per month thereafter.

CARNEGIE STEEL COMPANY.

Armor for the vessels authorized by the act of Congress approved March 3, 1905, viz. the battle ships South Carolina and Michigan.

Vessel.	Class A armor.	Price per ton.	Total.	Class B armor.	Price per ton.	Total.
	<i>Tons.</i>			<i>Tons.</i>		
For one battle ship No. 26.....	3,512	\$370	\$1,299,440	5	\$370	\$1,850
For one battle ship No. 27.....	3,512	370	1,299,440	5	370	1,850
Total.....	7,024	.....	2,598,880	10	.....	3,700

Vessel.	Class C armor.	Price per ton.	Total.	Bolts and nuts.	Price per ton.	Total.	Aggregate.
	<i>Tons.</i>			<i>Tons.</i>			
For one battle ship No. 26.....	147	\$370	\$54,390	30	\$370	\$11,100	\$1,366,780
For one battle ship No. 27.....	147	370	54,390	30	370	11,100	1,366,780
Total	294	.....	108,780	60	.....	22,200	2,733,560

Aggregate bid for armor for battle ships Nos. 26 and 27.

	Total tons.	Aggregate.
Armor	7,328	\$2,711,360
Bolts and nuts	60	22,200
Total.....	7,388	2,733,560

Deliveries of above armor will be commenced within six months after receipt of preliminary plans and continue at the rate of 600 tons per month thereafter.

MIDVALE STEEL COMPANY.

Armor for the vessels authorized by the act of Congress approved March 3, 1905, viz. the battle ships South Carolina and Michigan.

Vessel.	Class A armor.	Price per ton.	Total.	Class B armor.	Price per ton.	Total.
	<i>Tons.</i>			<i>Tons.</i>		
For one battle ship No. 26	3,512	\$346.00	\$1,215,152	5	\$345.00	\$1,725
For one battle ship No. 27	3,512	346.00	1,215,152	5	345.00	1,725
Total.....	7,024	.....	2,430,304	10	.....	3,450

Vessel.	Class C armor.	Price per ton.	Total.	Bolts and nuts.	Price per ton.	Total.	Aggregate.
	<i>Tons.</i>			<i>Tons.</i>			
For one battle ship No. 26.....	147	\$344.00	\$50,568	30	\$343.00	\$10,290	\$1,277,735
For one battle ship No. 27.....	147	344.00	50,568	30	343.00	10,290	1,277,735
Total	294	.....	101,136	60	.....	20,580	2,555,470

Aggregate bid for armor for battle ships Nos. 26 and 27.

	Total tons.	Aggregate.
Armor	7,328	\$2,534,890
Bolts and nuts	60	20,580
Total.....	7,388	2,555,470

Deliveries of above armor will be commenced on or before the dates required by the circular and specifications dated May 21, 1906, page 19, paragraph 115, and continue at the rate of 600 tons per month thereafter.

The Midvale Steel Company added to its bid a statement offering to undertake to advance the dates and increase the amounts of deliveries.

These bids were referred to the Bureau of Ordnance by the following indorsements:

“ Respectfully referred to the Bureau of Ordnance with the request that a schedule of the within bids be prepared and returned with recommendation as to award of contract.

“ By direction of the Secretary.

“ S. W. B. DIEHL,
“ *Judge-Advocate-General.*”

At that time there remained to be delivered by each of these three companies, under previous contracts, the following approximate amounts of armor:

Contract dated.	Bethle- hem.	Carnegie.	Midvale.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
December 15, 1903			2,979
December 31, 1903	175		
January 9, 1904		165	
April 1, 1905	1,225		
April 3, 1905		695	
April 5, 1905			1,000
Total	1,400	860	3,979

In compliance with the Department's indorsement, the Bureau of Ordnance submitted the following recommendation:

[Second indorsement.]

JULY 13, 1906.

1. Respectfully returned to the Navy Department, together with schedule and all papers.

2. In submitting its recommendation as to the award of this contract this Bureau desires to invite the Department's attention to the following points for its consideration:

3. The three bidders—Bethlehem, Carnegie, and Midvale Steel companies—represent the only armor-manufacturing plants in the country. The Bethlehem and Carnegie companies commenced the manufacture at the instance of the Government under contracts in 1887 and 1890, respectively, and the Midvale Company entered the field in competition, being awarded its first contract in December, 1903.

4. The bids of the Bethlehem and Carnegie companies are higher than those of the lowest bidder—the Midvale Steel Company. The status of unfinished armor contracts existing at date with these three companies is briefly as follows:

5. The Bethlehem Steel Company has to supply, under existing contracts, about 1,400 tons, of which 175 tons is to be delivered under contract of December 31, 1903, and 1,225 tons under contract of April 1, 1905. This armor will probably be all delivered before the end of this year.

6. The Carnegie Steel Company has to supply, under existing contracts, about 860 tons, of which 165 tons is to be delivered under contract of January 9, 1904, and 695 tons under contract of April 3, 1905. This armor will probably be all delivered in the next few months.

7. The Midvale Steel Company, under contract of December 15, 1903, is required to furnish 5,566 tons of armor, and under the contract of April 5, 1905, 998 tons of armor. Allowing 3 per cent additional required for ballistic plates, the total amount of armor being supplied by this company under existing contracts amounts to about 6,760 tons. Up to date they have delivered 2,844 tons.

8. The last of the remaining 3,916 tons of armor is required to be delivered not later than April 30, 1907. Although embarrassment is being caused the Bureau by delayed deliveries and it seems possible that the armor makers may be penalized, under the terms of the contracts, for delayed deliveries of certain portions of this armor, yet the Bureau is of the opinion that these contracts

will have been completed by the last date mentioned, April 30, 1907, the execution of which will necessitate deliveries of armor at the rate of 405 tons per month.

9. The greatest amount of armor this company has delivered in one month (April, 1906) is 622 tons. The highest average rate for three consecutive months (February, March, and April, 1906) was 488 tons per month, and the average per month for the four months (February, March, April, and May, 1906) was 414 tons.

10. The "Circular and specifications concerning armor plate," governing the bids for this armor for the *Michigan* and *South Carolina*, require deliveries of armor to commence nine months after receipt, by the armor makers, of the forging plans. Assuming that these plans are supplied them September 1, 1906, the first deliveries of armor should be made June 1, 1907, and continue thereafter at a monthly rate of 600 tons. It is probable, however, that the shipbuilders will require about 260 tons to be delivered about May 1, 1907.

11. From a consideration of the present status of existing contracts, detailed above, all three companies should be ready to begin deliveries at the time desired.

12. In the act of Congress making appropriations for armor and armament for the fiscal year ending June 30, 1907, it is provided "that no part of this appropriation shall be expended for armor for vessels except upon contracts for such armor when awarded by the Secretary of the Navy, to the lowest responsible bidder, having in view the best results and most expeditious delivery."

13. The Bureau is of the opinion that if the contract for all of this armor is awarded to one company, which will result necessarily in the complete closing down of the other two large armor-making plants, that "the best results" will not be obtained. The workmen skilled in this kind of work would become scattered; such of the plant as could be utilized for commercial work would be diverted to it; the armor plants would probably lose their identity as such, and it seems most probable that the companies would abolish them as such and not be willing in the future to undertake to collect their skilled force, refit the plant, and take up anew this special kind of work. The probable result of such enforced closing down of two armor plants would be to leave the country with only one armor plant to supply all the armor that may be required in the future. This, in the Bureau's opinion, is a condition to be avoided, if possible. Not only does the existence of several armor plants increase the resources, but they also encourage competition, as these bids show.

14. Although the capacity of one plant would seem ample for the present needs of the Navy, yet the chances of unlooked-for delays must be considered. The breaking down of a press or other important piece of machinery, the failure of one or more "groups" of armor to pass ballistic or other tests, a serious fire or other accident at the works, possible strikes, etc., any such conditions might cause delays in armor deliveries that would cause embarrassment at critical times or involve charges for delay on the part of the shipbuilders for nondelivery of material.

15. For these reasons, "having in view the best results and most expeditious delivery," the Bureau recommends that 50 per cent of the total amount of armor required be awarded to the Midvale Steel Company and that 25 per cent be awarded to each of the other companies, the Bethlehem Steel Company and the Carnegie Steel Company, provided the latter companies agree to furnish this armor at the price given by the lowest bidder, or, in other words, that the Midvale Steel Company be awarded the contract for supplying all the armor, etc., for one battle ship, aggregating about 3,694 tons, and that each of the other two companies, the Bethlehem Steel Company and the Carnegie Steel Company, be awarded one-half of the armor for the other ship, amounting to about 1,847 tons, provided they agree to accept the price of the lowest bidder.

N. E. MASON,

Chief of Bureau of Ordnance.

This recommendation met with the approval of the Navy Department, and the contracts for armor were so awarded, approximately 3,694 tons being awarded the Midvale Steel Company and 1,847 tons each to the Bethlehem Steel Company and Carnegie Steel Company.

At present date the Bethlehem and Carnegie Steel companies have completed the deliveries of all armor due under previous contracts except a few "shutter" plates, delayed awaiting templates to be furnished them, which delay is beyond

their control, and a few sighting hoods. Both firms have commenced the manufacture of the armor awarded them by the contracts of last August.

There remains at present date to be delivered by the Midvale Steel Company approximately 1,250 tons, under contract of December 15, 1903, and 1,000 tons (all) under contract of April 5, 1905. The Bureau has as yet received no notice that the manufacture of armor under the contract of last August has begun.

The possible imposition of penalties suggested above in paragraph 8 of Bureau of Ordnance indorsement has not been necessary.

The Midvale Steel Company has been granted, under the terms of its contracts and since the award of the contracts last August, forty-eight days' extension of time for required deliveries of armor due under its previous contracts as a reasonable consideration for unavoidable delays due to the breaking down of certain machines. This illustrates such a contingency as was considered by the Bureau of Ordnance when it made its recommendation for the award of the armor contracts, "having in view the best results and most expeditious delivery."

APPENDIX C.

JOINT ARMY AND NAVY BOARD ON SMOKELESS POWDER, BUREAU OF ORDNANCE, NAVY DEPARTMENT, *Washington, D. C., September 26, 1906.*

SIR: 1. Following an earlier report, dated August 1, 1906, forwarding revised specifications for the manufacture of smokeless powder, the Joint Army and Navy Board on Smokeless Powder submits the following report, dealing with the price which should be paid private manufacturers for smokeless powder for cannon to be made for the Government in accordance with the specifications above referred to. In arriving at the price hereinafter recommended the Board carefully considered all data which it could obtain, including the actual cost of manufacturing powder at the Naval Powder Factory at Indian Head, Md., and statements and information presented by the powder makers who were afforded an opportunity to appear before it to discuss the subject involved, to present their views as to the cost of manufacture, and to answer the questions of the board.

2. The price charged for smokeless powder for some years past has been 70 cents per pound, exclusive of the cost of the alcohol used, which heretofore has been supplied by the Government. The actual price paid, including the cost of the alcohol, has thus been approximately 74 cents per pound. Taking the figures furnished by the Naval Powder Factory for the cost of raw material and labor and accepting its estimate as to maintenance, depreciation, and fire loss, the cost of a pound of powder, based upon an output of 1,000,000 pounds, which is approximately the yearly output of that factory working night and day, is 54.6 cents. By adding the interest on capital invested in grounds, buildings, and machinery, the interest on capital invested at any time in material on hand, powder in process of manufacture, and powder in dry houses, taxes, administrative expenses not considered in the data furnished from the Naval Gun Factory, profit, etc., the price per pound is increased from 54.6 cents to approximately 69 cents. In the judgment of the Board it is probable that the experience of the private manufacturers enables them to cheapen the cost of production at certain points and that the actual cost of their powder is somewhat less than that of the Naval Powder Factory. Such advantage as they may gain here, however, is probably offset by expenses to which they are subject for pensions in the case of employees killed or injured in their works, by damages exacted by neighboring property owners, and by other expenses necessarily incident to the manufacture of powder.

From an economical standpoint a Government powder factory has advantages, some of which are the following: Smaller salaries for administrative officers, plant probably worked to full capacity while those of existing private manufacturers have been generally worked much below their maximum capacity as a result of limited orders. These advantages are, however, offset, in a measure, by a labor day of eight hours, while the labor day of private manufacturers is ten hours, and by the expense incident to a large number of holidays during the year for which the Government employees are given full pay.

It is considered probable also that private manufacturers have an advantage over the Government in the purchase of raw materials; but this subject is a

difficult one to investigate, and the board has no accurate information concerning it.

Based upon all data at its disposal, the board is of the opinion that a price of 69 cents per pound is a fair one to be paid private manufacturers for smokeless powder, the manufacturers to furnish their own alcohol. The board considers that the arrangement under which the Government has heretofore supplied the alcohol to the manufacturers has many disadvantages, and recommends that in future it be abandoned and that manufacturers be required to supply their own alcohol, which may be removed from bond free of duty under proper regulations of the Treasury Department.

3. In view of the more economical operation of the plants engaged in the production of smokeless powders for cannon when operated at approximately their full capacity, it is the opinion of the board that the above price of 69 cents per pound should be considered as applying only to the existing plants when the orders received from the Government are not in the aggregate sufficient to enable them to operate to their full capacity. The board therefore recommends that when the aggregate of the orders of the Government to the four following powder plants, the only ones now equipped to manufacture smokeless powder for the Government, viz, The E. I. Du Pont Company, The International Smokeless Powder and Chemical Company, The Laffin & Rand Powder Company, and the California Powder Works, exceeds 4,000,000 pounds, all powders ordered or contracted for in any given year in excess of 4,000,000 pounds be paid for at price of 65 cents per pound, the manufacturers to furnish the alcohol.

4. A duplicate of this report has been forwarded to the Chief of Ordnance, United States Army.

Very respectfully,

AUSTIN M. KNIGHT,
Commander, U. S. Navy, President of Board.

A. C. DIEFFENBACH,
Commander, U. S. Navy, (Retired).

B. W. DUNN,
Major, Ordnance Department, U. S. Army.

C. B. WHEELER,
Major, Ordnance Department, U. S. Army.

JOHN HALLIGAN, Jr.,
Lieutenant, U. S. Navy.

The CHIEF OF BUREAU OF ORDNANCE,
Navy Department, Washington, D. C.

[No. 3.]

BUREAU OF SUPPLIES AND ACCOUNTS—STATEMENT OF REAR-ADMIRAL EUSTACE B. ROGERS, CHIEF OF THE BUREAU OF SUPPLIES AND ACCOUNTS, NAVY DEPARTMENT.

COMMITTEE ON NAVAL AFFAIRS,
HOUSE OF REPRESENTATIVES,
Tuesday, December 11, 1906.

The committee met at 10.30 o'clock a. m., Hon. George E. Foss (chairman) in the chair.

The CHAIRMAN. We start in with your Bureau, on page 4, "Pay, miscellaneous. For commissions and interest." What are those commissions on?

Admiral ROGERS. The commissions are upon the money that is transmitted to London to be drawn against by the paymasters on foreign stations. We get interest on daily balances, and we pay them a commission.

The CHAIRMAN. What interest, 2 per cent a year?

Admiral ROGERS. Yes; last year the interest was greater than the commissions by about \$500.

The CHAIRMAN. The next is:

Transportation of funds; exchange; mileage to officers while traveling under orders in the United States, and for actual personal expenses of officers while traveling abroad under orders, etc.

That language is substantially the same all the way down through as last year, except this year you are asking for \$700,000 instead of \$650,000, an increase of \$50,000. Will you kindly explain the necessity for that?

Admiral ROGERS. That is based upon the increased demand and the fact that last year's appropriation has been overobligated \$16,514.98.

The CHAIRMAN. Are you asking for a deficiency this year?

Admiral ROGERS. Probably the Secretary will; I can not say.

The CHAIRMAN. What is the largest item of expenditure in that paragraph?

Admiral ROGERS. In pay, miscellaneous.

The CHAIRMAN. Yes.

Admiral ROGERS. Mileage and transportation of officers and civilian employees.

The CHAIRMAN. Can you furnish us a statement showing just what you have expended for these general items during the last year?

Admiral ROGERS. Yes; I have it here in rough form.

The CHAIRMAN. I wish you would place it in your hearing. We will be glad to look it over.

Admiral ROGERS. I suppose, Mr. Chairman, you do not want that accurate to the cent. It is an estimate, very fairly close.

The CHAIRMAN. We would like to have what it was for the last fiscal year, ending June 30.

Admiral ROGERS. Then I will send it to you.

The CHAIRMAN. Then we will pass over to the Bureau of Supplies and Accounts, page 127. The first is:

Provisions, Navy: For provisions and commuted rations for the seamen and marines, which commuted rations may be paid to caterers of messes, in case of death or desertion, upon orders of the commanding officers, commuted rations for officers on sea duty, etc.

The language there is the same until we get down to page 128, and then we have:

Six thousand United States Army emergency rations, two thousand two hundred and twenty dollars.

What are those for?

Admiral ROGERS. They were added to the estimates by order of the Secretary of the Navy. They were in last year's estimates with his approval. His letter directed that they should be, "one-half to be stored in Olongapo and one-half to be stored at a navy-yard on the Atlantic coast to be designated later by the Department."

The CHAIRMAN. How long will these rations keep?

Admiral ROGERS. They will keep practically for all time, sir. There is no limit to the time. I brought one of them here to show you [producing emergency ration].

The CHAIRMAN. How much do they cost now?

Admiral ROGERS. About 37 cents. That is the army emergency ration.

Mr. PADGETT. Mr. Chairman, last year did not the official head of this department testify that these emergency rations were utterly useless and a waste of money?

Admiral ROGERS. He was asked the same question that you asked me, and he stated, just as I have, that they were put in by order of the Secretary. The chairman asked him if he thought they were of much use, and he said he did not think they were.

The CHAIRMAN. That is my recollection, that he expressed it very strongly that it was a waste of money to include them.

Admiral ROGERS. I do not think he put it as strongly as that; but I think I can justify them; not this particular 6,000, but when you come to the next item, to the 75,000 that are asked for, I think they can be fully justified, and I want to explain to the committee just why they are asked for.

The CHAIRMAN. You are asking an increase here from \$5,220,000 to \$6,490,000, an increase of nearly \$1,200,000. What is the necessity for that?

Admiral ROGERS. That is based upon two things—the contemplated increase in the Navy of 3,000 men, making the present 37,000 augmented to 40,000, and the increased cost of the ration due to the changes of the last appropriation act, which has materially increased the cost of the ration, and the ration costs now, at an average, as far as can be judged, 35 cents, and 40,000 rations at 35 cents for 1908 is \$5,420,000. Then in addition there are 3,700 marines who are subsisted on ships, and the marine on the ship draws navy rations. That amounts to \$473,970. Then there are chaplains, boatswains, carpenters, midshipmen at the academy and at sea who still draw the

commuted ration and who are not on navy pay, and they number 1,828, and those rations, at 30 cents per diem, would amount to \$200,714.40. The estimate which was submitted to you by the Secretary, made up by Paymaster-General Harris, estimated those 1,828 rations at 35 cents. I have reduced it, making a difference of \$33,000 less than his estimate.

The CHAIRMAN. You had enough money last year, did you?

Admiral ROGERS. Yes; plenty.

The CHAIRMAN. If we should not give this increase of 3,000 men, if we allowed you the same amount that you had last year—\$5,220,000—would that be sufficient?

Admiral ROGERS. No, sir.

The CHAIRMAN. Why would it not, if there is no increase in the number of men?

Admiral ROGERS. Because if there is no increase of men the 3,700 marines on ships and the 37,000 men, which does not provide for an increase, and estimating 35 cents as the cost of the ration, it would amount to \$5,414,384.40, which is more than your total appropriation of last year. That is at 35 cents to the ration instead of 30 cents, as it has been heretofore. When you asked Paymaster-General Harris last year what would be the cost of the new ration he said probably 33 cents.

The CHAIRMAN. If we did not allow these 3,000 additional men, \$5,414,000 would be sufficient, would it?

Admiral ROGERS. Yes. Say, \$5,445,000, to make it even, or \$5,420,000.

The CHAIRMAN. Suppose we allowed a thousand additional men, what would the increase be?

Admiral ROGERS. That I will have to calculate.

Mr. PADGETT. He has estimated for 3,000 increase, and if you take one-third of that estimated increase you will get what it will be for 1,000 men.

The CHAIRMAN. It will be one-third of the estimated increase?

Admiral ROGERS. Yes. I did not make that calculation.

The CHAIRMAN. You say \$5,414,000. You are asking for \$6,490,000. There is a million dollars difference.

Admiral ROGERS. There are other items which must be added. This \$5,414,000 is simply for food and commuted rations. That does not include the labor in general storehouses, on which the estimate this year was \$655,000. The amount actually being used this year is \$641,000.

The CHAIRMAN. "Labor in general storehouses" is all included in this paragraph, and was included here last year?

Admiral ROGERS. Yes, sir. But this calculation that I gave you, \$5,414,000, is for food and commuted rations only.

The CHAIRMAN. For food only?

Admiral ROGERS. And includes commuted rations.

The CHAIRMAN. Are you increasing the labor in the general storehouses?

Admiral ROGERS. We are not increasing it. I have asked for an increase. Paymaster-General Harris has put the labor in general storehouses this coming year at \$655,000.

The CHAIRMAN. How much was it last year?

Admiral ROGERS. I do not remember what his estimate was last year, but the allotment this year is \$641,000. That is what we are using to-day, for this current year, and that will last until the 30th of next June. The amount used for 1906 I have not got here. That is 1907.

The CHAIRMAN. I wish you would furnish a statement of the amount expended under these different general headings, like labor in general storehouses, and so forth.

Admiral ROGERS. I think that is in last year's report, the allotment for that year; that is, for 1906. I have here the allotment for 1907; that is the distribution which Admiral Harris has made in all our navy-yards and stations of the world—in the United States and on foreign stations.

The CHAIRMAN. I would like to have a statement in connection with all of these paragraphs, showing, for instance, the provisions in regard to commuted rations for seamen and marines, commuted rations for officers on sea duty, and so on.

Admiral ROGERS. That I have just given you.

The CHAIRMAN. We want that information under these general headings, so if questions are asked on the floor, as they frequently are, we can point out where the expenditure has been made.

Admiral ROGERS. There is one difference in the estimate this year from what it was in previous years. The estimates for previous years have been based on the cost of the ration at 30 cents, which is the legal cost of commutation.

The CHAIRMAN. Yes.

Admiral ROGERS. This year there is a recommendation before the Secretary of the Navy to stop all commutation of rations at sea, on seagoing ships, and in that case it will make the ration cost 35 cents. There will be no more issues at 30 cents in cash. So all I can tell you is what was paid for commutation last year; that is, for the fiscal year 1906. We are now operating under this act, and will be until next June.

The CHAIRMAN. Yes. If we should allow an increase of 1,000 men, then we must figure on a ration at 35 or 40 cents?

Admiral ROGERS. Thirty-five cents.

The CHAIRMAN. Thirty-five cents?

Admiral ROGERS. I consider that will be sufficient.

The CHAIRMAN. For a thousand men that would not be very much. That would only be \$350 a day.

Mr. PADGETT. That 35 cents is the ration for one day?

The CHAIRMAN. Yes; for one day.

Admiral ROGERS. For the year that would be \$128.10. One thousand times that is \$128,100. That is just what the increase would be.

The CHAIRMAN. Per thousand men?

Admiral ROGERS. Per thousand men, at 35 cents per ration, for three hundred and sixty-six days.

The CHAIRMAN. You say the food will cost \$5,414,000?

Admiral ROGERS. Without any increase in men; yes, sir; and including commuted rations.

The CHAIRMAN. Without any increase of men?

Admiral ROGERS. The food and commuted rations for officers at sea.

The CHAIRMAN. You say that does not take into consideration the general labor in storehouses?

Admiral ROGERS. No.

The CHAIRMAN. That this last year was \$600,000?

Admiral ROGERS. During the current year, \$641,000, or \$641,496.

The CHAIRMAN. That would make \$6,054,000. You have asked for \$6,490,000. That for the 3,000 additional men would be \$384,000. Altogether it would be \$6,438,000. I see how you figure it. Have you an unexpended balance, or will you have this year?

Admiral ROGERS. I think it likely we will.

The CHAIRMAN. Have you had in previous years unexpended balances under this?

Admiral ROGERS. Yes; I think in every year.

The CHAIRMAN. Would you kindly furnish a statement of the unexpended balance, all that could be reappropriated?

Admiral ROGERS. Our unexpended balance for the fiscal year 1906 is \$632,000.

The CHAIRMAN. What was it the year before that?

Admiral ROGERS. That I can not give you.

The CHAIRMAN. I wish you would find out what the unexpended balance is, because those amounts have been appropriated for this particular purpose once, and they have been charged up to the Navy, and there is no reason in the world why they should not be reappropriated, if they have not been used, and in that way we can cut down our present appropriation.

Admiral ROGERS. No doubt. I asked this figure before leaving the Bureau, and they told me that was correct to a cent—\$632,843.58 is the unappropriated balance for the fiscal year 1906.

The CHAIRMAN. How is the new ration working?

Admiral ROGERS. Very well indeed. It has not worked itself out as yet so that we can get an idea of the cost. We will not know that until the next quarter. We have only one quarter's returns in—that is the quarter ending in September—and that gives us nothing on which to base a true conclusion. This estimate of 35 cents is that of my predecessor, and I have accepted it.

The CHAIRMAN. The next item is on page 132.

Provisions, Navy, emergency rations: For the purchase of seventy-five thousand United States Army emergency rations, thirty thousand dollars.

That is a new item.

Admiral ROGERS. That was put in the estimates on the order of the Secretary of the Navy, and it is for the purpose of supplying to ships what is called "for abandon ship." We have a monthly drill on shipboard for the eventualities of wreck, in which every boat in the ship is fitted out with her entire outfit of arms, instruments, and food, and every man that would go into her, and she leaves the ship, so that the ship is absolutely without anyone on board. That is a monthly drill.

Now, instead of using dummies for that drill, as is done in the British navy, we use an actual ration—that is, bread and meat. Those two articles are put in the boats. You can well imagine that in a cutter, for instance, with 35 or 40 men on board the amount of food for five days will be very bulky, and these emergency rations are recommended for the purpose of taking the place of those "abandon ship" rations, which are separated from the rations of

the ship, every box being marked and stowed in a particular place, and in a very handy place, so that in case of wreck of the ship they can be put instantly into the boats when the ship is abandoned. The consequence is that there is a large amount of bulk and weight in the boats, which contain the crew and officers, when the ship is abandoned, and also during those drills a large destruction of provisions naturally occurs, because those provisions that are being so handled once a month are more or less broken and destroyed and they go to waste and are a loss every year.

The idea is to put 75,000 of those emergency rations in place of the other rations, and the gain will be very great. They cost but 2 or so cents more than the regular ration we ask you to appropriate for, and the saving will be quite 90 per cent in volume and 80 per cent in weight. And I hope that the committee will see its way to including those emergency rations.

The CHAIRMAN. Are these the same rations that you speak of—these 6,000 United States Army emergency rations?

Admiral ROGERS. They are the same ration.

The CHAIRMAN. They are the same?

Admiral ROGERS. Yes.

The CHAIRMAN. If we allowed these 75,000 rations, I presume you could get along without the 6,000?

Admiral ROGERS. I would rather that you would ask Admiral Dewey, when he comes before you, in regard to those 6,000 rations. I am not prepared to state that they are no good. I think they are.

The CHAIRMAN. Does that recommendation come from the General Board?

Admiral ROGERS. From the General Board.

The CHAIRMAN. I am speaking of this provision for emergency rations on page 132 of the bill.

Admiral ROGERS. That comes also from the Secretary and from the General Board.

The CHAIRMAN. From the General Board also?

Admiral ROGERS. Yes.

Mr. PADGETT. What is in that general ration, can you tell?

Admiral ROGERS. Yes; it is composed of a bread and meat component and a chocolate component. It is also made up with a coffee component, and it is supposed to feed one man for one day and to give him food and drink. It is calculated to subsist one man for one day, maintaining his full strength. This is stated in detail on the label.

Mr. PADGETT. Did I understand you to say a moment ago that in this "abandon ship" exercise every man got off the ship?

Admiral ROGERS. Every man leaves the ship; yes, sir.

Mr. PADGETT. What is done with the ship?

Admiral ROGERS. This is done when the ship is at anchor, and I have seen a ship left without a man on her, except a few on watch in engine and dynamo rooms.

Mr. PADGETT. The ship is anchored?

Admiral ROGERS. Yes; the ship is at anchor in harbor. This drill is very rarely performed in a seaway, although I have seen it done when the ship was underway. It is a regular monthly drill. The order is given, and every man takes his place opposite the boat. It is a drill on all our ships. Then every man goes to his boat and does

what he would do in case the ship was an actual wreck. We put on the small boats, the arms, ammunition, a compass, instruments, fish hooks and lines, tools, food, and water, and so forth.

The CHAIRMAN. The next paragraph is "Contingent, Bureau of Supplies and Accounts." You are asking for an increase of \$15,000?

Admiral ROGERS. Yes, sir.

The CHAIRMAN. From \$160,000 to \$175,000. What is the necessity for that?

Admiral ROGERS. You have not the Secretary's estimates transposed here, with the change in verbiage?

The CHAIRMAN. Yes; we have the "interior fittings." The new language is in italics.

Admiral ROGERS. The reason of that was my own suggestion to the Secretary of the Navy. When the Bureau of Yards and Docks puts up a building for us it is built according to contract. They will make any repairs in gutters, plumbing, and floors, partitions, and so on, but when it comes to shelving and such changes that take place inside of a building they have refused to allow the money for that. This "contingent" has been used for that purpose, but I want the authority of law, so that there can be no possible question about it. That is the reason I asked the Secretary simply to authorize an existing condition.

The CHAIRMAN. Has there been any dispute with the Comptroller about it?

Admiral ROGERS. No; never.

The CHAIRMAN. There never has been?

Admiral ROGERS. The point has never been raised, but the application came to me to approve an expenditure of \$400 for Mare Island, and I refused to approve it until I had talked with the Secretary about it, and he suggested, if I had any scruples about it, to ask the committee to put it in the act. That is all. It is simply that I was a little doubtful about it.

The CHAIRMAN. Would these words, "interior fittings," give you any right to put in anything which you have not done before?

Admiral ROGERS. None whatever. "Interior fittings" means shelves, closets, gratings to shut off certain places where stores are stowed so that people shall not have access to them—things of that kind that the Bureau of Yards and Docks have declined to allow us, and have compelled us to stand out of the appropriation of the Bureau; and it has always been done out of the appropriation for contingent, and there is no question about it. The committee knows what it is used for.

The CHAIRMAN. Last year you had \$160,000.

Admiral ROGERS. Yes.

The CHAIRMAN. There is no deficiency this year?

Admiral ROGERS. No, sir; there will be a balance.

The CHAIRMAN. A balance left over?

Admiral ROGERS. Yes, sir.

The CHAIRMAN. About how much?

Admiral ROGERS. About \$10,000.

The CHAIRMAN. Would not that be enough—if you get the same appropriation as last year, would not that be sufficient to carry you through?

Admiral ROGERS. What is left over from 1906 is \$11,800.

The CHAIRMAN. Could you reduce your estimate at all?

Admiral ROGERS. I would not like to, because there are other matters which, if you wish me to, I will state, and I will give you the reason why I do not want to reduce it—why I asked the \$15,000 in addition. I see that you have not got this in italics here, although it is a new item, “coffee mills and repairs thereto.” That is new.

The CHAIRMAN. What is the reason for that?

Admiral ROGERS. The reason is the same as that for the “interior fittings.” We have a coffee mill at New York which supplies all the coffee for the entire service. We ship it all over the world. We can roast, grind, and ship it more economically than we can buy it—at a less cost to the Government, and the men are accustomed to it, and we have a mill there from which we supply all the coffee for the service. That mill is very old and is worn out, and I want to put in a new one at a cost of about \$5,000, which will be included in this appropriation. This was based on my experience in the Cuban affair. I was then the general storekeeper at Boston, and I had two ships to fit out, and I had foreseen this emergency and had a large quantity of coffee on hand.

The CHAIRMAN. You have had a coffee mill heretofore, and have been running it?

Admiral ROGERS. Yes, sir; and have been repairing it under this appropriation.

The CHAIRMAN. And you have been repairing it under this appropriation? Under what appropriation did you first purchase that coffee mill?

Admiral ROGERS. I presume under the same appropriation, because it has been there for a number of years—ten or twelve years or more.

The CHAIRMAN. Will you furnish us a statement of all of these items here for the fiscal year ending June 30, 1906—that is, for instance, what you paid out for expressage, and so on, and the expenses of this naval clothing factory, and all of it?

Admiral ROGERS. Yes; I can give you an estimate of some of those things now.

The CHAIRMAN. Put that in your hearing, if you will, because we may be asked about those things on the floor.

Admiral ROGERS. I only want to say, to continue what I was stating, that we found this coffee mill broke down right in the middle of this Cuban affair, and we had but 14,000 pounds of coffee in New York. That was a warning.

The CHAIRMAN. How much will a new coffee mill cost?

Admiral ROGERS. Five thousand dollars.

The CHAIRMAN. How many will you want?

Admiral ROGERS. One; that will give us an output of 5,000 pounds daily.

The CHAIRMAN. You say this is the most economical way to get the coffee?

Admiral ROGERS. Oh, far and away. That coffee we can deliver in China, including the cost of transportation, for 13 cents a pound.

The CHAIRMAN. How much would it cost if you had to buy it?

Admiral ROGERS. Not less than 21 cents to 23 cents, or more.

The CHAIRMAN. The next item is:

Freight, Bureau of Supplies and Accounts: All freight charges pertaining to the Navy Department and its bureaus, except the transportation of coal for the Bureau of Equipment, five hundred thousand dollars.

Last year you had \$400,000. Here you are asking for an increase of \$100,000.

Admiral ROGERS. You allowed us a deficiency of \$75,000 in the act of February 27, 1906. We are only asking for the coming year \$25,000 more than that deficiency.

The CHAIRMAN. How are you coming out this year with that \$75,000?

Admiral ROGERS. I think we will come out with a small deficiency, possibly even, and if short, not to a large amount. The Navy is increasing, Mr. Chairman, and \$25,000 in addition to last year's appropriation and the deficiency is not a very great sum.

The CHAIRMAN. It says here, "except the transportation of coal for the Bureau of Equipment." Do you know what that amounts to in the Bureau of Equipment?

Admiral ROGERS. No, sir.

The CHAIRMAN. That is all done by colliers, I suppose?

Admiral ROGERS. Yes; and merchant ships. The Chief of the Bureau of Equipment will give you that.

The CHAIRMAN. Yes. Under "freight charges," I suppose your provisions are the things that you freight the most of?

Admiral ROGERS. No, sir; we pay the freight on every movement of stores for the entire service, except expressage. Freight on everything that is shipped is paid by the Bureau of Supplies and Accounts, except express charges—a small sum each year.

The CHAIRMAN. Those charges are paid by the different bureaus?

Admiral ROGERS. By the different bureaus; yes, sir.

The CHAIRMAN. Now we come to "Civil establishment, Bureau of Supplies and Accounts." That seems to be the same as last year. There are a few added here.

Mr. ROBERTS. Before you pass by page 133 I would like to ask the Admiral a question or two.

The CHAIRMAN. Very well.

Mr. ROBERTS. You have a stenographer in the general storekeeper's house in Boston, have you not?

Admiral ROGERS. Yes, sir.

Mr. ROBERTS. You have to loan that stenographer about one month in the year to the court-martial board?

Admiral ROGERS. Yes, sir.

Mr. ROBERTS. What effect does that have upon your business?

Admiral ROGERS. It affects us somewhat. It simply shortens our work that much. We have more than one stenographer there. We have three, two stenographers and a typewriter.

Mr. ROBERTS. It would not affect you as much as some bureaus that have only one, then?

Admiral ROGERS. It does affect us, and I have protested to the commandant, but only verbally. Mr. Snow, the naval constructor, did so officially.

Mr. ROBERTS. I have heard considerable complaint of that system there. It hampers the work.

Admiral ROGERS. It is properly chargeable to "Pay, miscellaneous, expenses of courts-martial," and the expense of a typewriter should be paid from "Pay, miscellaneous;" but their services are distributed, equally divided, among the bureaus there, in proportion to their facilities, during the session of the court-martial.

Mr. ROBERTS. I understand that the system there is to take the stenographer out of each bureau a month at a time, and the court-martial is almost in continuous session there?

Admiral ROGERS. Practically, yes, sir.

The CHAIRMAN. The only change I see is on page 138. The old law read "one shipping and bill clerk," and you have changed it to read "one receiving and shipping clerk, one thousand four hundred dollars," an increase of \$200. Do you wish the name of the clerk changed?

Admiral ROGERS. Yes, sir.

The CHAIRMAN. You are asking for an increase. That is at Cavite?

Admiral ROGERS. That increase is made upon the recommendation of the general storekeeper there. The expenses are growing in the Philippine Islands since the American occupation.

The CHAIRMAN. Are the clerks paid more over there in Cavite than at home?

Admiral ROGERS. Yes, sir; as they always have been in California for very many years, on account of the increased cost of living.

The CHAIRMAN. You are asking also "one lumber inspector, at one thousand dollars; one expert packer, at nine hundred dollars." That is at Cavite?

Admiral ROGERS. That was before the committee last year, and the correspondence is all contained in the last year's testimony. It was approved then by the Secretary and is again approved by him this year.

The CHAIRMAN. Do you secure these men in this country, or do you take Filipinos out there?

Admiral ROGERS. No, sir; they are generally white men, under the classified service, and sent out from this country. In fact, I am safe in saying that they all are.

The CHAIRMAN. On page 139 is the next:

Naval training station, Great Lakes: In general storehouse: One clerk, one thousand dollars; in all, one thousand dollars.

Do you need a clerk there now?

Admiral ROGERS. Yes, sir; we do. That station is being established and its work is growing. The clerk who is there now is paid out of the appropriation "Provisions, Navy." It is simply transferring him. He is paid under "Labor in general storehouses," and this transfers him to the civil establishment, where he belongs, and the same is true of the naval station at Guantanamo. Those clerks exist there, and they are paid out of the "Labor in general storehouses," so that if this is allowed in the civil establishment "Labor in general storehouses" may be reduced just that much.

The CHAIRMAN. You have a clerk at the Rhode Island training station, have you?

Admiral ROGERS. Yes, sir.

The CHAIRMAN. And also at California?

Admiral ROGERS. Yes, sir.

The CHAIRMAN. So that you are asking for no more at those stations than you have for the others?

Admiral ROGERS. I do not exactly see the bearing of your question in regard to California and Newport.

The CHAIRMAN. I wanted to see where they were—whether they were provided out of any fund.

Admiral ROGERS. These clerks?

The CHAIRMAN. Yes.

Admiral ROGERS. These clerks are now on this duty, and paid, as I say, out of "Labor in general storehouses." They are all paid by the United States.

The CHAIRMAN. They are all paid in that way?

Admiral ROGERS. Yes, sir; the point is that they belong in the civil establishment.

Mr. ROBERTS. It is a question of which fund they should be paid out of?

Admiral ROGERS. They are now paid out of "Provisions," and if this is allowed the fund "Labor in general storehouses" will be reduced by just that much.

The CHAIRMAN. The next is "Naval station, Guantanamo, Cuba."

Admiral ROGERS. That is the same: "One stenographer, at four dollars per diem," and "one store man, at three dollars and four cents per diem."

The CHAIRMAN. You have all these at the present time?

Admiral ROGERS. These are there now, and are paid out of "Labor in general storehouses."

The CHAIRMAN. I guess this covers your Bureau.

Admiral ROGERS. That is all, sir. I would like to say one thing more. Although I have included, under direction of the Secretary, 75,000 rations for "abandon-ship" purposes—75,000 emergency rations—I do not think that will be sufficient. If we have 30,000 men afloat in the Navy that will only give two and one-half rations to each man, which is not enough, and although I would very much prefer that this should be made a separate appropriation, if the committee is going to allow it, I will say this, that if the committee is not willing to allow this \$32,220 and will incorporate in the general terms of the act the authority to buy them—that is, under the caption of provisions, and will permit the purchase of, say, 100,000, or not more than 100,000, emergency rations, I think I can buy them without any extra sum being appropriated.

(At 11.40 o'clock a. m. the committee adjourned until to-morrow, Wednesday, December 12, 1906, at 10.30 o'clock a. m.)

A.

PROVISIONS, NAVY.

37,000 enlisted men of the Navy (as at present) ; 3,700 marines	
on ships—subsisted by the Navy; 40,700 in all, at 35 cents	
per ration for 366 days (leap year) -----	\$5, 213, 670. 00
1,828 officers—commuted rations therefor 30 cents each, for 366	
days -----	200, 714. 40

Labor in general storehouses-----	\$655, 000. 00
75,000 + 6,000=81,000 emergency rations at 37 cents each (75,000 estimated, at 40 cents)-----	32, 220. 00
Total -----	6, 101, 604. 40
If 3,000 additional men allowed-----	384, 300. 00
Total will be-----	6, 485, 904. 40
If 1,000 additional men allowed, total will be-----	6, 229, 704. 40

B.

If \$300,000 of balance of "Provisions, Navy," for 1905 and \$500,000 of balance of same appropriation for 1906 be reappropriated, the estimates may be reduced as follows, each by \$800,000:

For 37,000 men, 3,700 marines (subsisted by the Navy), and commuted rations for 1,828 officers-----	\$4, 614, 384. 40
For 3,000 additional men, otherwise as above-----	4, 998, 684. 40
For 1,000 additional men-----	4, 742, 484. 40

To whichever sum is finally decided on should be added the amount for labor in general storehouses.

C.

PROVISIONS, NAVY, 1907.

Allotment for labor in general storehouses during present fiscal year.

Portsmouth -----	\$23, 000. 00
Boston -----	70, 000. 00
Torpedo station-----	7, 461. 92
Training station, Newport-----	2, 600. 00
New York-----	215, 000. 00
League Island -----	36, 500. 00
Naval Academy-----	5, 486. 57
Washington -----	18, 000. 00
Norfolk -----	58, 000. 00
Pensacola -----	15, 500. 00
New Orleans-----	7, 590. 60
Mare Island-----	75, 000. 00
Training station, California-----	2, 553. 92
Puget Sound-----	18, 500. 00
Guantanamo -----	3, 504. 16
San Juan-----	5, 653. 80
Cavite -----	57, 000. 00
Guam -----	11, 000. 00
Honolulu-----	1, 500. 00
Olongapo -----	6, 646. 00
Total-----	640, 496. 97

D.

CIVIL ESTABLISHMENTS, BUREAU OF SUPPLIES AND ACCOUNTS, 1908.

Per diem employees.

	313 days.	314 days.
New York:		
2 receiving clerks, at \$4.....	\$2,504.00	\$2,512.00
2 leading men, at \$2.50.....	1,565.00	1,570.00
5 pressmen, at \$2.76.....	4,319.40	4,333.20
1 box maker, at \$3.....	939.00	942.00
1 engine tender, at \$3.26.....	1,020.38	1,023.64
1 coffee roaster, at \$2.50.....	782.50	785.00
1 fireman, at \$2.....	626.00	628.00
1 messenger, at \$2.25.....	704.25	706.50
1 cloth inspector, at \$4.....	1,252.00	1,256.00
1 messenger, at \$2.25.....	704.25	706.50
Difference.....	46.06	.....
Total.....	14,462.84	14,462.84

Expenditures under appropriation "Pay, miscellaneous," for the fiscal year 1906.

Mileage and transportation of officers and civilian employees.....	\$434,976.03
Net loss on exchange.....	21,340.94
Telegrams, cablegrams, and postage.....	37,508.58
Transportation of funds.....	1,592.37
Expenses of boards.....	6,542.48
Telephone service.....	1,909.59
Expenses of navy pay offices.....	110,623.29
Expenses of prisons and prisoners, court-martial expenses, etc.....	17,072.62
Advertising.....	502.01
Dispatch agent, New York and London.....	1,829.93
Naval attachés.....	12,875.05
Miscellaneous.....	6,344.82
Estimate for mileage, transportation, and other miscellaneous items not paid or adjusted by the Auditor, added to arrive at balance shown by liability record.....	13,397.27
Total.....	666,514.98
Appropriation for fiscal year 1906.....	650,000.00
Overobligated.....	16,514.98
Unexpended balance of fiscal year—	
1905.....	6,248.79
1904.....	22,597.59
1903.....	10,773.24
1902.....	9,320.16

PROVISIONS, NAVY, 1906.

Statement of estimated expenditures under above appropriation.

Purchase of provisions at yards and stations and by pay officers afloat.....	\$2,305,956.52
Rations commuted.....	1,561,032.50
Labor in general storehouses.....	620,167.40
Total.....	4,487,156.42
Balance.....	^a 732,843.58
Appropriated for fiscal year 1906.....	5,220,000.00

^a From the balance shown above, it is estimated that about \$100,000 should be deducted to cover rations due to men in hospitals and hospital apprentices on duty at hospitals, to be charged to this appropriation and credited to the naval hospital fund upon final settlement by the auditor of pay officers' accounts, information as to the actual sum of these charges being not available at the present time.

Unexpended balance for fiscal year—

1905 -----	\$331, 078. 61
1904 -----	^a 72. 28
1903 -----	^a 244. 53
1902 -----	^b 550, 171. 61

CONTINGENT SUPPLIES AND ACCOUNTS, 1906.

Statement of estimated expenditures under above appropriation for each of the principal separate items which make up this appropriation.

Expressage -----	\$169. 46
Fuel -----	1, 822. 96
Books, blank, and stationery—	
From Public Printer -----	\$25, 385. 61
Purchased in open market -----	11, 114. 35
	36, 499. 96
Advertising -----	986. 83
Furniture for general storehouses and pay offices in navy-yards -----	14, 910. 99
Expenses of naval clothing factory and machinery for same (includes 50,000 yards enameled cloth) -----	12, 611. 25
Postage, telegrams, and telephones (estimated \$10,000 of which was spent in the foreign account) -----	14, 573. 68
Tolls and ferriage (car tickets) -----	530. 00
Yeoman's stores and safes -----	5, 775. 18
Newspapers -----	139. 75
Ice -----	1, 970. 66
Other incidental expenses, including packing boxes, materials, chemists' supplies, butter inspection, etc -----	11, 372. 10
Estimated amount spent on foreign stations, other than for postage and cablegrams -----	2, 610. 61
Transfers at navy-yards and stations from N. S. F. stores and general stock includes stationery for office of general storekeeper, pay officers ashore and afloat; materials for packing stores, care of and interior fittings for general storehouses, etc -----	44, 253. 63
	148, 227. 06
Total expenditure -----	11, 772. 94
Balance -----	
Appropriated for fiscal year 1906 -----	160, 000. 00
Unexpended balance for fiscal year—	
1905 -----	25, 026. 15
1904 -----	7, 856. 91
1903 -----	4, 808. 76
1902 -----	22, 171. 56

^a Balance of deficiency appropriation carried to surplus fund.

^b Five hundred thousand dollars of this balance was reappropriated for 1904.

[No. 4.]

BUREAU OF EQUIPMENT—STATEMENT OF REAR-ADMIRAL WILLIAM S. COWLES, CHIEF OF BUREAU.

COMMITTEE ON NAVAL AFFAIRS,
Thursday, December 13, 1906.

The committee this day met, Hon. George E. Foss in the chair.

The CHAIRMAN. The first item is, "Equipment of vessels: For hemp, wire, iron, and other materials for the manufacture of cordage, anchors, cables, galleys, and chains," etc. The language of this paragraph is the same as that of last year?

Admiral COWLES. Yes, sir.

The CHAIRMAN. Last year we gave you \$3,000,000 and this year you are asking for \$3,500,000, an increase of \$500,000?

Admiral COWLES. Yes, sir.

The CHAIRMAN. What is the necessity for that increase?

Admiral COWLES. There has been a decided advance in the requirements of the service during the past year or so, and these requirements are increasing. Much has been accomplished in the establishment of wireless telegraph stations ashore, and the installation of wireless plants on naval vessels. The above expenses have been charged to "Equipment of vessels," but the appropriation has not been increased to cover them. Many modern appliances have recently been installed on naval vessels for sanitary and other reasons, particularly in connection with the cooking and messing systems. There has also been a large increase in electrical appliances for interior and exterior signaling, and for the health and comfort of the officers and crews of seagoing vessels. This has caused a gradual but permanent increase in the expenditures for equipment and supplies. A considerable amount will be required during the year for equipment work in connection with the installation of fire-control systems in all vessels of the Navy.

It is estimated that approximately \$100,000 will be required from this appropriation to pay equipment employees at navy-yards on account of Saturday half holiday, annual leave, and legal holidays during the year. This is an expenditure for which absolutely no service is rendered. In order that the output of the equipment shops may not be reduced by the effect of these holidays the equipment force must be correspondingly increased to offset the time lost on this account.

A recent decision of the Department directs that all supplies under title Y, for new constructions (heretofore purchased from the appropriation "Increase of Navy"), be purchased from the appropriation "Equipment of vessels." This will materially increase the expenditures under this appropriation.

The estimate for this additional amount has been submitted only after a careful deliberation of the increased requirements imposed on the Bureau, and it is hoped that the full amount required will be appropriated.

The Bureau is prohibited by law, under penalty, from creating deficiencies in its appropriations. Under the present purchasing and accounting system of the Navy Department it is impracticable for the Bureau to know at any time with a degree of accuracy the status of its appropriations. In order to avoid this I asked for an extra clerk this year and they cut him out.

The CHAIRMAN. You asked for the extra clerk in the legislative bill?

Admiral COWLES. Yes, sir; but he was not allowed. So I do not see how I am going to be able to keep my books or to tell where we stand with regard to appropriations and expenditures any better than now. The appropriation is therefore practically reduced by the amount of this reservation, say, \$250,000, because we do not know what we have to calculate upon exactly.

The CHAIRMAN. How are you coming out this year?

Admiral COWLES. We are running very close in order to get along. I can give you the items that go to make up the \$3,500,000, if you would like.

The CHAIRMAN. Yes, sir; in general terms.

Admiral COWLES. Hemp for rope, cordage, etc., \$40,000; wire, iron, etc., for manufacture of chain cables, anchors, and ground tackle, \$25,000; canvas for awnings, sails, etc., \$133,000 (this seems a large sum, but the canvas for a first-class battle ship amounts to nearly as much as it did for an old-fashioned ship whose motive power was sail. We use about \$20,000 for a battle ship, and we used a little over \$30,000 for the old ship, which shows that canvas is still largely employed). Water, \$50,000 (that is, the water for the boilers); library books, \$30,000; stationery, typewriters, etc., \$73,000 (we furnish all the typewriters for the ships and for all our own work); removal and transportation of ashes, \$7,000; interior appliances and tools for use at navy-yards, \$81,236; athletic outfits, \$7,500; wireless telegraphy and outfits, \$400,000; china, glass and plated ware, table linen, etc., \$25,394; bakery, galley mess, and pantry utensils, \$25,000; labor in navy-yards, \$1,000,000; pay for legal holidays, half holidays, and annual leave, \$105,000; pilotage and towage, \$49,000; canal tolls, wharfage, etc., \$15,283; nautical and astronomical instruments, compasses, binnacles, etc., \$100,000; naval signals and signal apparatus, \$8,000; lanterns, lamps, etc., \$5,000; bunting and other flag material, \$40,000; photographic materials, instruments, etc., \$1,000; musical instruments, music, etc., \$16,000 (every big ship has a band); electrical appliances, interior and exterior communication, etc., \$400,000, and miscellaneous, impracticable to specify, \$863,587.

That \$863,000 seems rather large, so I have itemized what it is spent for and I have a list here:

Carpets, rugs, curtains, rods and fixtures, dustpans, mats (floor, anchor, collision, sword), shades, cuspidors, bath tubs, water coolers, scales, pumps, hose, nozzles, reducers, boat cloths, boatswain's calls, commanders (iron and wood), boat cushions, dies, fenders (boat and ship), hand and leg irons, Jacob's ladders, life belts, life buoys, nail punches, marlin spikes, mufflers, cargo nets, palms (roping), fire

grenades, seines, trun-buckles, printing outfit, awls, chisels, crowbars, hammers, hatchets, knives, mauls, mallets, pliers, scrapers, wheelbarrows, brooms, brushes, cleaning materials, trays, sewing machines and materials, squilgees, soap, matches, toilet paper, oil cans, filters, tanks, waste cans, sounding machines and equipment, logs and lines, war games, alcohol, graphite, grease, oil and other lubricants, rosin.

The CHAIRMAN. Do you feel as though you could shade that at all this year, or is it rather a liberal estimate?

Admiral COWLES. I do not think it is. I think it is a very close estimate. In fact, \$4,000,000 was the amount originally determined upon, but it was finally decided to make \$3,500,000 suffice if practicable. It is nothing less than a hardship to have to make \$3,000,000 meet the demands made on the Bureau.

Mr. KITCHIN. What was the balance on hand last year, if any?

Admiral COWLES. Very little, indeed. In fact, I should have spent the money up to about \$5,000 had not a gentleman who desired a contract made a foolish mistake. He did not get the contract, therefore, and we had about \$80,000 on hand.

Mr. KITCHIN. How is the \$3,000,000 lasting this year?

Admiral COWLES. We have to stop spending money much before the end of every month in order to make it last.

The CHAIRMAN. I want to ask you whether you have examined into the question of the cost of wire rope. That was a subject that was pretty well aired on the floor last year.

Admiral COWLES. Yes, sir; I have. I do not think that you can buy wire rope for much less than we can make it, judging from the fact that the contractors for these new ships went from one cordage company to another before they could get anybody to take the contract, and then they sometimes fetched up and asked us to make it ourselves. Of course they can make it cheaper outside, but not as good, especially the cordage. As we have a ropewalk, the only difference in cost would be due to the lack of opportunity to have anything like piecework, and our eight-hour labor day and annual leaves go to make up the difference. It is the difference in chain making that is rather large, and not the difference in the ropewalk. It was the chain making where the great point was made, I think. Our specification is not the same as Lloyds, and Lloyds governs outside work. Our own specifications require iron for the chain that costs 4 cents a pound. Outside they will make a chain and furnish material for that. We are reducing the cost for ironwork at Boston very much. We are putting in machinery for the large chains, and we expect to go on and put in machinery for the small chains and reduce the entire cost very much. We are working at that slowly, because we have to use the shop continually for repairing; we can not tear it all to pieces and remodel it, because we keep it going all the time, and so we do a little here and there. We did put in one or two very good machines this year, and we have lowered the price about 1 cent a pound for the chain itself; for the shackles, swivels, and jew's-harps we have lowered it very considerably. We have reduced it from 28 cents to about 10 cents for those parts.

Mr. KITCHIN. Do we use the same iron in our chain as the private chain makers use?

Admiral COWLES. No, sir; we do not.

Mr. KITCHIN. We use a better grade?

Admiral COWLES. Yes, sir; a better grade. They claim on the outside that they make a chain for 4 and 5 cents a pound. We have to give 4 cents for our material, and it costs more for labor than it does for material—say, 5 cents. So that it would cost 9 cents at least to make the finished product.

The CHAIRMAN. If your chains were made by a private concern, they would have to be made under the navy specifications?

Admiral COWLES. Yes, sir. We had some chain made this last year. The Monongahela Iron Works took the contract and made the chain—that is, the plain chain. When it came to the swivels, the jew's-harps, and the shackles, they could not make them, and tried to get it done by three or four other firms. These latter agreed to make them at so much a pound; a different price (I have all the papers if you wish to see them); but they could not do it; they wrote afterwards and threw up the contract. Finally, the first-named firm came to us and asked if we would make the swivels, etc., charging for them at our rates, and we had them made at the Boston yard. They could not fill the contract for our big chains unless we made the special parts for them. Other firms agreed to take the contract and then threw it up, and in the end, as above stated, we did the work ourselves.

The CHAIRMAN. Have you bought any chain from private concerns during the last year?

Admiral COWLES. We are just now completing the buying of the chain that I said was made by the Monongahela Iron Works, and for which we finished the special parts ourselves.

The CHAIRMAN. What did you pay for it?

Admiral COWLES. We paid about $8\frac{1}{2}$ cents.

The CHAIRMAN. How large is it?

Admiral COWLES. Two and three-quarter inches. Of course, we have to make our chain much lighter than the merchant ship's chains, and consequently much stronger, or it will not do the work. We can not carry so much weight. You take the 3-inch chain, 15 fathoms, and it weighs about 8,000 pounds. Fifteen fathoms of a $2\frac{3}{4}$ -inch chain weighs 6,500 pounds, and so on down for the lighter chains. That is as heavy as we can afford to make them. We have to save weight on account of the weight required for the armor and guns. We make chains out of the very best material, just as strong and as light as possible.

Of course our chains are subjected to a great deal more stress than a merchant ship's chain. A merchant ship's chain, corresponding to navy $2\frac{3}{4}$ -inch chain, weighs about 10,000 pounds for every 15 fathoms. They generally carry a chain a little over 3 inches, which they use in the stream occasionally. A merchant ship generally goes alongside a dock, whereas our ships lie at anchor and there is consequently a great strain brought on their chains. If you are going ahead 3 knots and do not slack up or the anchor does not drag, the chain will carry away. That is as much as the chain will do, but of course the chain is slackened up, and all this extra work wears it out rapidly. The chains have to be pretty strong, and as they have to be light also they must be made of the very best material. Consequently, we have to buy material that outside chain makers would not furnish.

Mr. KITCHIN. What is the standard length of a chain for a battle ship?

Admiral COWLES. Two chains 120 fathoms, and a third chain called the "sheet" anchor chain, 120 fathoms also.

Mr. KITCHIN. You have three chains 120 fathoms long on each ship?

Admiral COWLES. Yes, sir.

The CHAIRMAN. The weight of the chain is very great?

Admiral COWLES. Yes, sir. The weight of that is about 6,500 pounds for 15 fathoms, and you carry 120 multiplied by 3—360 fathoms.

Mr. KITCHIN. With the large 3-inch chain it would be a hundred tons?

Admiral COWLES. It would run up to about 8,000 pounds for 15 fathoms.

Mr. KITCHIN. That would be 64,000 pounds to a chain?

Admiral COWLES. Yes, sir. They are all the time after us to reduce the length of the chains, but you can not do it because at any time you might lose 100 fathoms of chain and an anchor, and you may not be where it is possible to replace it. You may send down divers, but you may not find it; and you may lose the chain in 20 fathoms of water, where it is very difficult to dive, and you may never get the chain back at all.

The CHAIRMAN. The next item is "Coal and transportation," \$3,750,000. That estimate is the same as the appropriation last year?

Admiral COWLES. Yes, sir.

The CHAIRMAN. Are you expecting to have a large unexpended balance this year?

Admiral COWLES. No, sir.

The CHAIRMAN. Do you require all of this appropriation?

Admiral COWLES. I do.

The CHAIRMAN. How many tons of coal do you purchase?

Admiral COWLES. Last fiscal year we purchased 672,867 tons all told, at an average cost of \$4.20 per ton. The year preceding 543,421 tons, at an average cost of \$5.05 per ton.

Mr. KITCHIN. Does this item include the appropriation for what is known as the reserve supply of coal?

Admiral COWLES. I have not bought any considerable amount of coal this year for reserve. I am buying little more than necessary for use to keep the ships going. The General Board likes to have a good deal of coal at the different coaling depots. For instance, two hundred thousand tons at Cavite. I have only 70,000 tons there now. I am going to send 50,000 tons there shortly, as soon as the necessary arrangements for freighting it can be made.

The CHAIRMAN. What do you do; buy it here now?

Admiral COWLES. Yes; we are requiring bids for its transportation in American vessels, steamers, sailing vessels; likewise for its transportation in foreign bottoms, and for coal laid down at Cavite, including transportation. In general terms, we want to see what kind of a bargain we can make. The desire is to ship American coal in American bottoms, but it costs generally \$2.50 to \$3.50 more a ton to land it at Cavite than it does to put the same coal down in foreign bottoms.

Mr. KITCHIN. That is by reason of the special act of Congress, that is all?

Admiral COWLES. Yes, sir. You would naturally use your own coal, and I have not bought a ton of Welsh coal yet for Cavite.

The CHAIRMAN. What makes up the difference; is it in the cost of the material itself?

Admiral COWLES. No, sir.

The CHAIRMAN. Simply the maintenance of the American ships?

Admiral COWLES. Yes, sir. A good many of them if they carried coal out to Manila would not get a cargo back and they would have to charge freight for both ways.

Mr. KITCHIN. That \$3 practically amounts to a \$3 subsidy to the American ships?

Admiral COWLES. Yes, sir.

Mr. KITCHIN. What does the coal cost you?

Admiral COWLES. About \$5 a ton. That is the all-around price. Coal is worth from \$2.75 to \$3 here, steam coal. I can give you a good idea of what it is costing just now. Coal loaded in Government colliers or chartered colliers for shipment costs at present \$2.75 f. o. b. per ton. Georges Creek and Eureka coal cost \$3.25 delivered alongside at New York in barges, and \$2.85 alongside in barges at Philadelphia. Sterling Powelton costs \$3.20 in New York Harbor and \$2.80 at Philadelphia. These prices are all for delivery alongside in barges and are not the price of the coal delivered under the chute, which is less. Elk Garden costs \$2.60 on board Government barges at Baltimore for shipment to Annapolis. That would be practically under chutes; \$2.85 alongside in barges at the Naval Academy. It costs 25 cents more delivered there; \$3.10 at the Naval Academy, stored and trimmed, or stored and piled ashore. Davis Big Vein Cumberland costs \$2.75 delivered at Naval Academy, piled and trimmed. Georges Creek costs \$3.10 alongside navy-yard, Washington, in canal boats. Pocahontas delivered at Lamberts Point, under the chutes, costs \$2.75 per ton.

Mr. KITCHIN. I suppose you will put those figures in the hearings?

Admiral COWLES. Yes, sir.

Mr. KITCHIN. Now, please tell us the cost of some of the coal delivered at Cavite.

Admiral COWLES. To put it out there in American vessels costs about \$10 a ton.

Mr. KITCHIN. That is American coal?

Admiral COWLES. Yes, sir; it costs \$6.50 and \$7.50 per ton freight to get it out there in American vessels, and then there must be added the cost of the coal.

Mr. KITCHIN. \$6.50 freight?

Admiral COWLES. Yes, sir; \$6.50 and \$7.50.

The CHAIRMAN. Would that be on steamers or sailing vessels?

Admiral COWLES. Six dollars and fifty cents for American sailing vessels, and \$7.50 for American steamers.

The CHAIRMAN. Is there competition between the American ships for this business, or is there practically one price?

Admiral COWLES. There is practically one price. American vessels are offered the Bureau as they become available at a given rate. This rate is the same in each instance, and is seldom modified however much or however little the Bureau desires the services. The

average rate for the shipment of coal to Manila in 1904 by foreign steamer was \$5.05. No other kind of vessels were chartered during the year. In 1905 the average rate by foreign steamer was \$4.80 per ton; by American steamer, \$7.38 per ton, and by American sailing vessel, \$6.50 per ton. In 1906 49,567 tons were shipped to Cavite. The average rate by foreign steamer for 18,574 tons of this was \$4. The remainder, 30,989 tons, were shipped in American sailing vessels at an average rate of \$6.04 per ton. No American steamers were chartered, though some offered at \$7.50. We chartered American vessels from Arthur Sewall & Co., I. F. Chapman & Co., and D. B. Dearborn.

Mr. KITCHIN. I infer from what you state that American coal delivered at Cavite costs somewhere between \$9 and \$10 a ton.

Admiral COWLES. Yes, sir; when shipped in American vessels. More than \$10 when shipped in American steamers.

Mr. KITCHIN. What can you buy the foreign coal for?

Admiral COWLES. For probably \$3 less per ton.

The CHAIRMAN. Is it just as good coal?

Admiral COWLES. Yes, sir.

Mr. LOUD. The vessel that takes coal out there brings back Philippine products?

Admiral COWLES. Some of them do. They do if they can.

Mr. LOUD. There is about the same quantity, as I recollect, of hemp and sugar coming this way as there is coal going out there.

Admiral COWLES. I expect they can get some freight, but they complain a good deal that the people who trade regularly out there have rather a cinch on them, and they can probably take freights at much lower rates. American vessels will take coal to Manila and then go on to Hawaii in ballast and get sugar and come home.

Mr. LOUD. It has always been a mystery to me why it has never been arranged that the boats taking coal out could get a cargo coming back so as to lower the freight.

The CHAIRMAN. Insure them a cargo back, you mean?

Mr. LOUD. If that coal was being shipped out by private parties one of the first things they would look after would be to see that coal was sent out in boats that would bring cargoes back—to combine freight—so as to get cargoes both ways, and thereby lessen the freight. It has been a mystery to me why that has not been accomplished. There is about the same quantity of freight coming back as there is coal going over.

Admiral COWLES. Yes, sir; but the return freights are commercial cargoes and are brought back by foreign ships that can handle them at cheaper rates. If private parties were required by law to ship their coal in American vessels, they would find it necessary to use the very limited number of American vessels as they become available, whether return freights were available or not, in the same manner that the Bureau is now required to do. There is no chance to wait for the sugar season or the hemp season, as vessel owners can not afford to do so and will not have their ships idle. As quickly as they arrive in port and are discharged they must load and depart, if not with a load of coal for the Government then for any kind of a cargo they can get. It is a part of the regular business of the ship's owner or agent to arrange return cargoes for the ships. They are generally sufficiently alive to the situation to do this when it is possible, and

usually on their success or failure depends the rate for the outbound cargo.

Mr. KITCHIN. There has been a good deal said about the development of some coal fields on a near-by island?

Admiral COWLES. Yes, sir; they have not any coal out there yet. They talk about it a good deal, and they wanted us to use it. We tried some of it and found it had too much sulphur in it, and that the carbon was low, and it was not coal that we could use without injuring the boilers. There is coal in Borneo, in the Philippines, and in China. There is also coal in Japan, but it is not good, except the Yakaido coal. The Japanese use the latter themselves and will not let you have it. It is said that there is good coal in Alaska, and I wish they would mine it, but they have not yet got communication down to Resurrection Bay to get it to market. Coal is much needed on the Pacific coast just now, and dealers would gladly buy all the Government has stored out there at rates much in excess of what we paid for it. They recently offered us \$10 a ton, and it cost us about \$7 to get there.

Mr. LOUD. Going back to the same topic, the hemp and the sugar have to come this way at a specified time?

Admiral COWLES. Yes, sir; when vessels are at hand to bring them.

Mr. LOUD. And the coal going the other way, is that spread over the whole year, so much a month, or is it available so it could be sent out at any time?

Admiral COWLES. It runs along through the year as ships arrive on this side and become available. Generally about twice a year you get the best chance. Of course their sugar is not always ready and their hemp is not always ready.

Mr. LOUD. But the coal is always ready?

Admiral COWLES. Yes, sir.

Mr. KITCHIN. You have said that the officers desire 200,000 tons of coal at Cavite?

Admiral COWLES. Yes, sir.

Mr. KITCHIN. And we have 70,000 tons there now and you contemplate sending out at an early date about 50,000 tons, approximately?

Admiral COWLES. Yes, sir.

Mr. KITCHIN. How much do you think you will probably send out in the next twelve months—that is, for the fiscal year for which we are now appropriating, from July 1, 1907, to July 1, 1908?

Admiral COWLES. I should say I would send about 150,000 tons.

Mr. KITCHIN. During the fiscal year covered by this appropriation?

Admiral COWLES. Yes, sir. That would give me enough to burn the coal we use out there—about 10,000 tons a month—and not run my supply down too far.

Mr. KITCHIN. It has occurred to me that, under your statement, if we were permitted to buy foreign coal there we could probably save \$400,000 by repealing the provision that requires us to use American coal.

The CHAIRMAN. Is there not some provision in the law whereby, if you believe these companies are holding you up, you can buy foreign coal?

Admiral COWLES. That is the reason we are putting out all these advertisements, and we will find out what we can do. If they attempt to hold us up we will buy foreign coal, or ship our coal in foreign bottoms. The law provides that if exorbitant rates are asked for American ships the President may waive its requirements, but it does not state as to what shall be considered exorbitant rates.

The CHAIRMAN. Have you any authority in such cases under the law?

Admiral COWLES. Only such as stated above.

Mr. LOUD. I would like to ask you if there has ever been an attempt made to systematically get hold of the freighting so as to combine the coal going out and the return products of hemp and sugar?

Admiral COWLES. No, sir; such a thing is not practicable. Shipments depend on the available number of ships. We take about every ship that offers. We do not ask them why they are going.

Mr. LOUD. Would not a private individual sending coal out there try to get the benefit of a combination of the freights?

Admiral COWLES. He might try. But if required to ship in American vessels he would have to take them as they come. Foreign vessels look to the return cargo, for, as stated, their success or failure to secure one will regulate the outgoing freight, and owners of such ships know that the question of rate will cut some figure in the transaction.

Mr. LOUD. Why could not the Government do that?

Admiral COWLES. The Government does all in that direction that a private shipper could possibly do. It has always been the practice heretofore to ship on a low market, except in cases of necessity. It is doubtful if any private shipper ever did or ever could secure rates as low as have been quoted to the Bureau for foreign bottoms. In 1906 we chartered foreign steamers as low as \$4 per ton; American steamers demanded \$7.50. After sufficient tonnage was secured foreign steamers offered as low as \$3.75 and \$3.90. In October, 1906, the Bureau chartered schooners for coal to Guantanamo, Cuba, at \$1.40 per ton; at the same time a commercial charter was reported, in a sheet devoted to that purpose, at \$2.25 per ton.

The CHAIRMAN. That is really a matter for the ships themselves?

Admiral COWLES. Yes, sir.

Mr. LOUD. But a private individual having coal to go out there would undertake, through the shippers or owners, to get the benefit of the combination in some form?

Admiral COWLES. The Government does this in demanding the lowest possible rate, and shipowners know they must depend on return freights in some direction or other in order to make rates for the coal cargo that would be considered. It is the American ship that gets the high rate, and we have little choice in the face of the law of April 28, 1904.

Mr. LOUD. If I had that coal shipped out myself I venture to say that I could get it shipped a great deal cheaper than the Government does by making a combination.

Admiral COWLES. As stated above, I doubt that any commercial institution ever did or ever will get rates any lower than have been secured by the Government. This for foreign bottoms, of course. For American ships we must either accept the rate, however high it may be, or lose the ship.

Mr. KITCHIN. My recollection of the testimony before the committee of Congress for six or seven years past is that we have been paying from \$2 to \$3 more in the total cost of coal out there than we could have bought the same coal for if we had been permitted to buy foreign coal. I believe under the law now that we have a right to buy foreign coal in cases of emergency.

Admiral COWLES. Oh, yes; in case the price is too high we can buy foreign coal or ship American coal in foreign ships; but what is considered "too high" has not yet been determined.

Mr. KITCHIN. I really think that is a very important part of this bill, and I think if you amend your testimony at all, Admiral, you should give us as full information as possible.

Admiral COWLES. I will.

The CHAIRMAN. And I wish also you would put in a copy of the law.

Admiral COWLES. A copy of the law is appended. I also append a statement showing the cost to ship coal to Cavite for the past four years.

[PUBLIC—No. 198.]

AN ACT to require the employment of vessels of the United States for public purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That vessels of the United States, or belonging to the United States, and no others, shall be employed in the transportation by sea of coal, provisions, fodder, or supplies of any description, purchased pursuant to law, for the use of the Army or Navy unless the President shall find that the rates of freight charges by said vessels are excessive and unreasonable, in which case contracts shall be made under the law as it now exists: *Provided*, That no greater charges be made by such vessels for transportation of articles for the use of the said Army and Navy than are made by such vessels for transportation of like goods for private parties or companies.

SEC. 2. That this act shall take effect sixty days after its passage.

Approved, April 28, 1904.

Statement showing cost of transportation of coal to Manila, fiscal years 1903-1906.

1903.

Kind of vessel.	Number of vessels.	Tonnage.	Average rate.
Steamers, foreign	10	41,985.5	\$4.77
Highest rate paid (British steamer)			\$4.95
Lowest rate paid (British steamer)			4.75

1904.

Steamers, foreign	12	57,338.5	\$5.05
Highest rate paid (British steamer)			\$5.35
Lowest rate paid (British steamer)			4.35

1905.

Steamers:			
Foreign	17	85,837.5	\$4.80
American	5	39,114	7.38
Sailing vessels American	5	19,396	6.50
Total	27	144,347.5	5.73
Highest rate paid (American steamer)			\$7.50
Lowest rate paid (British steamer)			4.25

Statement showing cost of transportation of coal to Manila, etc.—Continued.

1906.

Kind of vessel.	Number of vessels.	Tonnage.	Average rate.
Steamers, foreign.....	3	18,578	\$4.00
Sailing vessels, American.....	8	30,989	6.04
Total.....	11	49,567	5.27

Highest rate paid (American sailing vessel).....	\$6.50
Lowest rate paid (British steamer).....	4.00

The CHAIRMAN. Contingent. Bureau of Equipment: Express charges on equipment stores, packing boxes and material, and so forth, \$15,000 instead of \$11,000 last year. Will you kindly explain the necessity for the increase?

Admiral COWLES. Well, we had to get more money last year.

The CHAIRMAN. You had a deficiency, did you?

Admiral COWLES. Yes. \$15,000 contingent fund is itemized as follows: Express charges, \$3,000; packing boxes and material, \$1,400; printing, \$100; advertising, \$700; telegraphing, \$1,250; furniture, \$1,800; postage, \$400; car fare, \$300; ice, \$425; telephone, \$1,200; laundry, \$150; labor in navy-yards, \$1,800; miscellaneous, \$2,475. That makes up the \$15,000. In the curtailment of expense for the fiscal year ending June 30, 1906, it was necessary to dispense with many telegrams; we had to stop telegraphing altogether in many cases, and it resulted in a good deal of embarrassment. The Bureau submitted estimates for \$14,000 for the current fiscal year last time, and the Department approved them, but only \$11,000 was appropriated.

The CHAIRMAN. The next item is "Ocean and lake surveys, hydrographic surveys, and for the purchase of nautical books, charts, etc., \$75,000."

Admiral COWLES. That we use up every year, and we could use a great deal more. With that \$75,000 we purchased charts, \$30,000; nautical books, \$700; pay for hydrographic surveys and draughtsmen whom we have on all of the surveying ships, \$25,000; surveying instruments, \$12,500; express charges on charts, books, etc., \$500; miscellaneous materials, instruments, lumber, things which it is impracticable to classify, \$6,000.

The CHAIRMAN. So you require that \$75,000?

Admiral COWLES. We require it; yes.

The CHAIRMAN. Where are you surveying now, or have you been surveying, in the last year?

Admiral COWLES. We have been surveying at Guantanamo, and we have been surveying on the coast of Santo Domingo, and we are now surveying down at Cape Cruz on the south coast of Cuba.

The CHAIRMAN. Depots for coal: And to enable the Secretary of the Navy to execute the provisions of section 1552 of the Revised Statutes, etc., \$400,000.

Admiral COWLES. In regard to that I will say that there has been no money appropriated since the act of March 3, 1905. In the estimates for the fiscal year 1906, the Bureau submitted an estimate for \$700,000 under this appropriation, but \$300,000 was appropriated in the act of March 3, 1905. When the estimates for the present

fiscal year were prepared by the Bureau, an item of \$850,000 was submitted. The Department did not see fit to pass this item to Congress, and there was therefore no appropriation for the establishment of coal depots for the fiscal year. The total amount appropriated for the last four years amounts to but \$900,000. That is all now used up, and we must now await an additional appropriation before undertaking any new work in the way of establishing coaling stations. We asked for \$800,000 this year, but the Secretary cut it down to \$400,000.

Mr. KITCHIN. Where is it proposed to spend this money?

Admiral COWLES. The Bureau has under construction a coaling plant at California City Point, and the funds we have here are insufficient to carry this out to completion. That place is right outside of San Francisco. There is also under construction at Hospital Cay, Guantanamo, Cuba, a coaling station.

The CHAIRMAN. How many in all?

Admiral COWLES. Two; one each at Guantanamo and California City Point.

Mr. KITCHIN. What is the amount proposed to be expended at each place?

Admiral COWLES. Two hundred and fifty thousand dollars is required to finish California City Point, and \$250,000 is required for Hospital Cay, Guantanamo; and we also want \$50,000 for Bradford, but we do not seem to be able to get very far. I have mentioned proposed expenditures for \$550,000 already, and in addition I wanted \$250,000 to start the construction of a plant at San Diego, Cal., making \$800,000 all told, but the Secretary says we can only have \$400,000.

Mr. KITCHIN. How much have we already expended in California on this coal depot, and how much at Guantanamo?

Admiral COWLES. We have work now in progress at Guantanamo which will cost when completed approximately \$300,000, and at California City Point which will cost approximately \$325,000. The funds for this work have been withdrawn from the general account and set aside for the work in hand. The amounts stated, however, are only sufficient to make a good start on these plants. The necessary wharf at each place has required the greater part of each allotment, and there is no money for housing the coal. The additional \$250,000 each is required to complete them.

Mr. KITCHIN. Is it considered that \$250,000 will complete the coal depot at Guantanamo, Cuba?

Admiral COWLES. Yes, sir; and \$250,000 more for California City Point.

Mr. KITCHIN. That will make the total cost at San Francisco \$575,000, estimated, and the total cost at Guantanamo \$550,000?

Admiral COWLES. Yes, sir.

Mr. BUTLER. Let me ask you something regarding the policy of our Department as to coaling stations. As a civilian, it gives me a great deal of concern that perhaps we have not sufficient coaling stations, sufficient places where our ships could stop for coal, and I think I appreciate the necessity of frequent coaling places. Do you intend to make a big depot at Guantanamo?

Admiral COWLES. Yes, sir. We are at work on it now.

With the building of the Panama Canal the Caribbean Sea becomes a focus of maritime commercial activity which will surpass in importance the Mediterranean Sea. Much of the traffic through the Suez Canal will be diverted to the Panama Canal. The United States has guaranteed the neutrality of the Panama Canal, which means not only the canal itself, but the seas closely adjacent to it. The trade routes which will pass through the Panama Canal are shown on the accompanying chart, and it may be seen how much the trade from Gulf ports and the Mississippi region and the Atlantic coast will be affected by the completion of the canal, and how dependent the trade will be on the canal.

The greater part of the trade through the canal will belong to the United States. On this account, and because of the present and future importance of the Gulf ports, the Caribbean region becomes of vast importance to the United States: surpassing even the importance of the Mediterranean to England.

Captain Mahan, in his *Interest of the United States in Sea Power*, concludes that the key to the Caribbean Sea is the Windward Passage, and that the power which has a superior sea force based near that passage will control the Caribbean, the trade leading to the Panama Canal, and the canal itself.

The United States has selected and now controls Guantanamo as its naval base in Caribbean waters. It is admirably situated on the south side of Cuba, about 50 miles from the Windward Passage, and on the flank of the trades routes, particularly the more important ones. A very good beginning has been made toward an efficient emergency repair and supply base; a first-class dry dock is being built, limited repair shops are planned, and a coal depot is being built.

A strongly fortified and equipped naval base, with a good strategical location like Guantanamo, is, in the opinion of the Department, essential to the protection of the Panama Canal and our trade interests. In Atlantic waters the only probable theater of war is the Caribbean, and our battle fleet must have a fortified base where the ships can refill with coal, stores, and ammunition, and repair damages quickly. In peace times our ships must be repaired at the home navy-yards, but in a war in the Caribbean they can not be sent to our home yards and suffer risk of capture and the longer time necessary. The absence of one or two ships might mean the loss of our control, and this can not be risked.

Guantanamo is remarkably well suited for the purposes of a naval base, not only on account of its excellent strategical position, but on account of its natural advantages. It has an excellent harbor, is now being defended by army fortifications, and lies on an island which has great natural resources capable of sustaining the naval base should it be cut off from the United States.

Extracts or statements from Mahan's Interest of the United States in Sea Power.

1. "If, on the other hand, we determine that our interest and dignity require that our rights should depend upon the will of no other State, but upon our own power to enforce them, we must gird ourselves to admit that freedom of interoceanic transit depends upon predominance in a maritime region—the Caribbean Sea—through which pass all the approaches to the Isthmus."

2. "Control of a maritime region is insured primarily by a navy; secondarily,

by positions, suitably chosen and spaced one from the other, upon which as bases the navy rests, and from which it can exercise its strength."

3. "The Caribbean can be more safely guarded against aggressive European States than the route to the Suez Canal, which passes close to their ports."

4. "When, if ever, people recognize that we have three seaboard, that the communication by water of one of them with the other two will depend in a not remote future upon a strategic position hundreds of miles distant from our nearest port—the mouth of the Mississippi—they will see also that the word 'defense,' already too narrowly understood, has its application at points far away from our own coast."

5. "Entrance to the Caribbean, and transit across the Caribbean to the Isthmus, are two prime essentials to the enjoyment of the advantages of the latter. Therefore, in case of war, control of these two things becomes a military object not second to the Isthmus itself, access to which depends on them."

6. Mahan states that "the strategic center of interest for both Gulf and Caribbean is to be found in the Windward Passage" (close to which lies Guantanamo).

In considering this subject the following memorandum of Commander C. C. Rogers, U. S. Navy (now hydrographer of the Navy Department, but recently commandant at Guantanamo), may be of interest:

1. Guantanamo Bay extends in a general north and south direction for a distance of about 11 miles, 6 miles of which length by navigable channel are within the limits of the reservation leased to the United States. The part within Cuban territory is known locally as Joa Bay, and has a depth of from 12 to 15 feet, although the channel leading into it is deep. It is the lower part, or that under the American jurisdiction, which is generally designated as Guantanamo Bay. This bay varies from a navigable width of $1\frac{1}{2}$ miles at its entrance to a general width of $2\frac{1}{2}$ miles between Fishermans and Caracoles points, attaining its greatest width—4 miles—between Point Palma, in the northwestern part, and the shores of Granadillo Bay, on the east. It is capable of admitting vessels of the largest draft without difficulty and in safety.

Between Corinaso and Deer points, in the southeastern part of the bay, the shore is deeply indented, and this feature is still more conspicuous in the northwest and northeast sections of the bay, such indentations forming secure bights for vessels of light to moderate draft. About one-half mile to the northward of Leeward Point is the mouth of the Guantanamo River, in which the depths are from 9 to 15 feet for a considerable distance within the entrance. During my experience as commandant, the tug *Sebago* navigated the lower part of this river in the service of the station; and a peculiar feature of it that can be utilized for military purposes is found in Mahomilla Bay, a body of water about $1\frac{1}{2}$ miles long in a northwest and southeast direction, and lying wholly to the westward of the lower part of the Guantanamo River, from which it is entered. This bay would accommodate a considerable flotilla of torpedo boats and destroyers, and any plan of defense would contemplate such use of it.

In the entrance to the Guantanamo River defense vessels of the *Florida* type could be anchored in an advantageous position for a 12-inch fire against an enemy's vessels attempting to enter the bay. The depth between St. Nicolas Point and the eastern shore varies from 28 to 64 feet, and about a quarter of a mile farther in—to the westward of Fishermans Point—from 22 to 47 feet. The latter reach affords an excellent site for a mine field. The general depth of the anchorage ground off Fishermans Point is about 7 fathoms; off the station on South Toro Cay about 5 fathoms. In the bight to the eastward of Corinaso Point there are depths of 7 fathoms, in which the defense vessels could lie and surprise an enemy operating against vessels using this bay as a port of refuge. The several indentations in the northwest section of the bay vary from 15 to 24 feet in depth. There is a large area in this section of about 22 feet depth. The indentations in the eastern part of Granadillo Bay vary from 24 to 29 feet in depth. These locations add greatly to the resources of the defense in operations requiring secrecy or surprise.

Eagle Channel between Medio Cay and the Toro Cays varies from 25 to 47 feet in depth and has a length of about $1\frac{1}{4}$ miles. It is narrow, but could be utilized by even heavy ships to great advantage in the defense of the bay. The shores to the eastward and westward of the entrance are steep-to, con-

sisting of bold bluffs with occasional small coves, in which it would be difficult to effect a landing on account of the Cuzco and other hills. The eastern part of the reservation is rugged and hilly and affords excellent sites for fortifications of any character. The southwestern portion of the station is marked by hills 100 to 300 feet in height. Even in the absence of permanent fortifications temporary batteries would hamper seriously the operation of a considerable force and would probably check, or eventually prevent, the entrance of a smaller force. A notable feature of this bay is that many of the smaller indentations are practically natural sites for dry docks. The several cays are also bordered by mangrove, from which there is a sudden descent into deep water. Hospital Cay, which is considered an excellent site for a coaling station, has a mangrove bordered on each side from 200 to 300 feet in width, which, with a little fill, forms at once an excellent platform for coal. The depths of 27 to 30 feet directly alongside, combined with the unusual extent of platform space, would make it possible for a large number of vessels to coal here at one time. Any amount of coal desired could be stored here, and with lighters and wharfage the facilities for coaling ships would be unsurpassed. The most recent information is to the effect that a daily supply of 500,000 gallons of water is obtainable in one of the valleys to the eastward of the small-arm target range. Plans are under consideration for utilizing this supply for the needs of the station. A 1,000,000-gallon reservoir is being built on North Toro Cay, from which this water can be distributed to any part of the station. The Yateras River, a part of which is about 7 miles to the northeast of the station, and the waterworks at Guantanamo are other sources of supply upon which requisition could be made if necessary.

2. Railways connect Guantanamo city with Caimanera and Déseo Point on the western side of the bay, and with Boqueron on the eastern side. A railway is also under construction between Guantanamo city and Le Maya, a station of the Cuba Railroad, and when this section is completed there will be a through railway service from Habana, via Guantanamo, to Caimanera. The several branches to Nipe Bay and other points on the northern coast increase the routes by which, if necessary, the station may be approached. The cables of the French Cable Company land at Fishermans Point and are connected, through the bay and overland, with Caimanera, where the cable office is located. Land telegraph lines extend from Caimanera to Guantanamo, which is connected with all parts of the island. Supplies can be obtained at Guantanamo and Caimanera for use of ships. During the stay of the Atlantic Fleet in the spring of 1906 the Caimanera Ship Chandlery Company supplied the fleet with fresh meat and vegetables. There was some difficulty in keeping up the supplies of vegetables, but the frequent visits of ships and the regular visits of the fleet are encouraging contractors to increase their facilities in this respect, and a continuance of this practice will probably bring the resources of the port to the point necessary for adequate supply.

The foregoing features, which contribute in such a marked way to the advantages of the port for naval purposes, are now being supplemented by permanent fortifications between Fishermans and Windward points and on Condé Bluff. An armored ship is kept permanently in the bay as a part of the station force.

MR. BUTLER. What territory, if I might use the term, ought the Guantanamo station to supply?

ADMIRAL COWLES. For all our vessels operating on the southern part of this coast.

MR. BUTLER. And in the Gulf?

ADMIRAL COWLES. Yes. You see we have given up our coaling station at Dry Tortugas altogether, and removed the coal from there.

MR. BUTLER. Tortugas was away up in the Gulf?

ADMIRAL COWLES. It is 60 miles west of Key West and about 95 miles north of Habana. We will probably have a coaling station at the mouth of the canal when that is done. We are surveying north of there now at Almirante Bay.

MR. KITCHIN. What appropriation are you already working on for this coal depot at Guantanamo?

Admiral COWLES. Under the old appropriation made two years ago.

Mr. KITCHIN. A similar one to this?

Admiral COWLES. Yes, sir.

The CHAIRMAN. How much unexpended balance have you to-day?

Admiral COWLES. We have not any money at all available for expenditure. We are just about even now.

The CHAIRMAN. How much are you asking for?

Admiral COWLES. We asked for \$800,000, but the Secretary reduced it one-half, and the estimate before you is \$400,000.

Mr. BUTLER. For Guantanamo alone, or all the stations?

Admiral COWLES. We wanted \$250,000 each for Guantanamo, California City Point, and San Diego, Cal., and \$50,000 to complete the station at Bradford. While coal depots in a number of places are desirable, I have asked for money to build the three which are considered the most important and most needed—that is, Guantanamo, San Francisco, and San Diego, Cal.—but if only \$400,000 is appropriated we will have to do the best we can and make it go as far as possible.

Mr. BUTLER. San Diego, Cal.?

Admiral COWLES. Yes. But we have not done anything there at all yet.

Mr. BUTLER. When was the authorization made for San Diego, Cal.; do you remember that?

Admiral COWLES. It was some years ago, before my time. There was a quarantine station down there, and we have been a little slow about getting the work done.

Mr. BUTLER. What do you know about the condition of the water at San Diego as to depth?

Admiral COWLES. It is all right; it is a good harbor.

Mr. BUTLER. Do you know anything about the movement that was made there to trade some land owned by individuals to the Government for the Government lands so as to improve the Government facilities?

Admiral COWLES. No; I do not know about that.

Mr. BUTLER. My recollection is that there was a bill pending in Congress authorizing the transfer.

Admiral COWLES. The land set aside for a coal depot was transferred from the War Department to the Navy Department. The Marine-Hospital Service secured a portion of this land by an act of Congress, on which was built the quarantine station. It was considered undesirable to build a coal depot alongside of a quarantine station, and the bill referred to was for the purpose of acquiring land elsewhere for the quarantine station in order that it might be moved.

Mr. BUTLER. This money is used simply at Guantanamo and California City Point?

Admiral COWLES. Nowhere else.

Mr. KITCHIN. What land? How much and where is the land that is intended to be purchased under this item? The item says "including the purchase of necessary land."

The CHAIRMAN. That is the general provision of the act itself.

Mr. KITCHIN. No; the act has not that provision in it.

Admiral COWLES. The clause "including the purchase of the necessary land," was first incorporated in the appropriation "Depots for coal," in the act of July 1, 1902. This was done because the accounting officers of the Treasury decline to allow, in the accounts of a purchasing pay officer, vouchers drawn in payment for land purchased in the State of Rhode Island on which is now established the coal depot at Bradford. At the same time an additional provision of the act referred to directed the accounting officers to allow this expenditure. It is very desirable that the phraseology of the act be not changed, in order that complications may not arise in the event of necessity arising to purchase land.

Mr. KITCHIN. I raised that point once and the Chair held that it was a necessary implication, but not provided for. In the act No. 1552 of the Revised Statutes it says:

The Secretary of the Navy may establish at such places as he may deem necessary suitable depots for coal and other fuel for the supply of steamships of war."

The fact that you put it in here, when it was not in the Revised Statutes, made me think that you had a certain piece of land already in view. I understand, Admiral, that you say you have no particular land in view at this time.

Admiral COWLES. No.

The CHAIRMAN. Civil establishments. Navy-yard at Portsmouth, N. H., same as last year.

At Boston you want one writer at \$950 and one at \$1,100, and increase for one of those writers, I believe, of \$150. That is a little more money.

Admiral COWLES. Yes; he wants his pay raised. He has been there a long time, and his pay ought to be raised. That is only a \$150 increase.

The CHAIRMAN. You have some other raises at New York.

Admiral COWLES. Well, we want a copyist in the testing laboratory at \$900.

The CHAIRMAN. Have you not one there now, paid under the general fund?

Admiral COWLES. This is a new man that we want. We have much work there, and we do a great deal of testing. We want a new man to help out in the work, and an increase of pay of two writers from \$950 to \$1,000.

The CHAIRMAN. How about Cavite—one file clerk and stenographer, \$900. Is that new?

Admiral COWLES. That is new. We haven't anybody there.

The CHAIRMAN. And at Guantanamo, one writer at \$1,200.

Admiral COWLES. We ask for a clerk and a writer at Guantanamo. The clerk was stricken off, in the interest of economy, and the writer was left. We have nobody there now. The officers are doing the work.

The CHAIRMAN. Is there much of an equipment station there?

Admiral COWLES. They are doing a good deal of work—a lot of surveying and construction work in the establishment of the coaling station. There is a great deal of work going on at Guantanamo.

The CHAIRMAN. How is the naval station at New Orleans? I see you want a clerk there at \$1,000.

Admiral COWLES. Yes; they want that.

Mr. KITCHIN. I think, Admiral, that you will find an apparent inconsistency in your testimony upon that Guantanamo matter, or that I have misunderstood you. I understood you to say at one time that you had spent nothing on the naval depot at Guantanamo, and that \$250,000 would cover the entire cost. I understood you to say later that you had already done some work there on this naval depot out of a former appropriation.

Admiral COWLES. We have established a temporary coaling station at Guantanamo, which will ultimately become a part of the permanent establishment. This station handled in an out last year over 35,000 tons of coal, at a valuation of approximately \$160,000, and in addition to this probably as much coal was issued at the station direct from colliers, which did not enter into the accounts of the station.

Contracts have been let and work is now in progress for the building of a permanent wharf and for providing and constructing the coal-handling plant and providing the necessary machinery. The concrete platform on which the coal will be stored and cottages for housing the custodian and other permanent employees are in course of construction by day laborers under direction of the commandant. Proposals will be opened on December 19 for the standpipe, and the distilling plant taken from Dry Tortugas is all ready to be transferred to Guantanamo and erected at that place. It will be seen, therefore, that while considerable work is in progress and in contemplation to make this place a complete and up-to-date coaling station it has but fairly begun. It is to complete this station that \$250,000 was requested.

[No. 5.]

BUREAU OF MEDICINE AND SURGERY—STATEMENT OF
P. M. RIXEY, SURGEON-GENERAL U. S. NAVY.

COMMITTEE ON NAVAL AFFAIRS,
Thursday, December 13, 1906.

The CHAIRMAN (Mr. Foss). The first is the "Medical Department: For surgeons for vessels in commission, navy-yards, naval stations, Marine Corps," and so forth, \$270,000, or an increase of \$15,000.

Surgeon-General RIXEY. That is due to the increased expense incident to the enlistment of 3,000 additional men estimated for by the Bureau of Navigation.

The CHAIRMAN. If those men are not allowed, you do not want it?

Surgeon-General RIXEY. No.

The CHAIRMAN. Have you not enough money to carry you through this year—you are not going to ask for a deficiency, are you?

Surgeon-General RIXEY. There will be no deficiency.

The CHAIRMAN. The next is, "Naval hospital fund, \$40,000," the same as last year. The next is, "Contingent: Bureau of Medicine and Surgery, \$60,000." There is an increase there of \$5,000.

Surgeon-General RIXEY. This increase will not be required if the 3,000 additional men asked for by the Bureau of Navigation are not allowed.

The CHAIRMAN. The next is, "Transportation of remains." Do you need that amount?

Surgeon-General RIXEY. Yes, sir.

The CHAIRMAN. Do you recall the significance of that date—April 21, 1898?

Surgeon-General RIXEY. Yes; it is the date of the beginning of the Spanish-American war.

The CHAIRMAN. The next is, "Repairs, Bureau of Medicine and Surgery." You ask for \$50,000, an increase of \$5,000.

Surgeon-General RIXEY. That is due to increases in the number of hospitals and the taking care of buildings, roads, cemeteries, grounds, etc. We have 18 hospitals.

The CHAIRMAN. Where are they?

Surgeon-General RIXEY. Yokohama, Japan; Canacao, P. I.; Chelsea, Mass.; Mare Island, Cal.; Newport, R. I.; New York, N. Y.; Norfolk, Va.; Pensacola, Fla.; Philadelphia, Pa.; Port Royal, S. C.; Portsmouth, N. H.; Puget Sound, Wash.; San Juan, P. R.; Sitka, Alaska; Ninth street and Pennsylvania avenue SE., Washington, D. C., and Naval Medical School Hospital, Washington, D. C.; also hospitals under construction at Annapolis, Md., and New Fort Lyon, Las Animas, Bent County, Colo.

The CHAIRMAN. They will not need many repairs.

Surgeon-General RIXEY. The new hospitals, so far as the buildings are concerned, will not need many repairs, but possibly some minor alterations; but the grounds and the roadways have to be improved, shade trees set out, and possibly some grading and filling in.

The CHAIRMAN. The next is a new provision—for the equipment of a hospital for laborers at the naval station, Guantanamo, etc.

Surgeon-General RIXEY. This appropriation of \$900 is for the equipment of a hospital for civil employees, for which purpose there are no funds applicable under the Bureau of Medicine and Surgery. The law clearly says that the funds are for the Medical Department of the Navy. This has been explained to the Secretary of the Navy, and the request for \$900 mentioned above is made by his direction. I believe the conditions existing at this station warrant this expenditure by the Government for the purpose referred to.

The CHAIRMAN. Why could he not do it out of his contingent fund?

Surgeon-General RIXEY. That question I can not answer.

The CHAIRMAN. I see it is "to be immediately available." That would be subject to a point of order.

Surgeon-General RIXEY. At present the medical and surgical requirements are furnished by the surgeons of the Navy at a great disadvantage, owing to the facilities being inadequate to handle the cases as required in a properly equipped emergency hospital. The building, I understand, has already been provided by the Department and the request for these funds is for the equipment of the building now available.

PUBLIC WORKS UNDER BUREAU OF MEDICINE AND SURGERY.

The CHAIRMAN. We will now turn to page 113, "Public works under Bureau of Medicine and Surgery." The first is the naval hospital at Norfolk, Va.; for the renovation of the present hospital buildings and the erection of new wards to cost not to exceed \$200,000. Last year you had \$100,000.

Surgeon-General RIXEY. Yes, sir. You gave us \$100,000 for 1907, with instructions that we should enter into a contract not to exceed \$200,000. Now we ask for the balance of this appropriation, \$100,000.

The CHAIRMAN. That will finish it up?

Surgeon-General RIXEY. Yes.

The CHAIRMAN. We now go to the naval hospital at Canacao, P. I. "For the construction of additional wards, \$50,000, and for the erection of two quarters for the medical staff, \$20,000; in all, \$70,000."

Surgeon-General RIXEY. We have a modern tropical naval hospital at Canacao. Its capacity is 120 beds, and should be increased to accommodate 200 patients under ordinary conditions. It is only necessary to add bed space to accomplish this, as the administrative facilities—the expensive part of the hospital—are already provided for. The addition of \$20,000 for the medical-staff quarters is important at this time, in that arranging for the wards will require the removal of some of the staff's quarters and the erection of additional accommodations for them. I sincerely hope that the \$70,000 may be

allowed in order that we may have ample accommodations for patients so far from home and suitable accommodations for the officers and hospital-corps men who have to labor in the care of the sick in the Tropics. In this connection I wish to state that on the occasion of my visit to the hospital in June last I found the standard of work done up to modern requirement and the results equal to that obtained in any portion of the world, the only difficulty being in the need of additional ward space for enlisted men and additional quarters.

The CHAIRMAN. Suppose we should decide to go up to Olongapo for our permanent naval station?

Surgeon-General RIXEY. The only need at Olongapo at present is a suitable sick quarters; for the station there is need of additional hospital facilities. This can be most economically supplied by enlarging the hospital at Canacao.

The CHAIRMAN. Will you take the men to Canacao?

Surgeon-General RIXEY. Yes; we will take any hospital cases there, emergency cases being cared for at the sick quarters. If it is decided to have a large station at Olongapo, in five or ten years from now you will probably build a hospital, and I selected a site for one while at Olongapo in June last. This hospital, however, should not be asked for until the Canacao and Yokohama hospitals are unable to care for the patients on the station.

The CHAIRMAN. Do you not use the Japanese hospital at Yokohama?

Surgeon-General RIXEY. Yes; especially for the sick of the cruising ships and those on the way home, or convalescents.

The CHAIRMAN. Did they buy the land at Yokohama?

Surgeon-General RIXEY. Yes.

The CHAIRMAN. The next is the naval hospital at Pensacola, \$25,000.

Surgeon-General RIXEY. I asked the Secretary for \$75,000. Since making this request for this hospital a hospital has been established in Bent County, Colo., an abandoned army post. This will relieve the hospital at Pensacola by caring for the tubercular cases and makes it possible to get along with a smaller appropriation. The \$25,000 approved by the Department will make it possible to improve the facilities at the Pensacola hospital for the care of the station sick and those from cruising ships.

The CHAIRMAN. The next is "Naval hospital at Puget Sound, Wash.: For the erection of naval hospital buildings (to cost not to exceed \$150,000), \$75,000."

Surgeon-General RIXEY. The naval hospital at Puget Sound has only a few beds; in fact, it is more sick quarters than a hospital. One hundred and fifty thousand dollars will be required to build a hospital there. If \$75,000 were allowed, work could be commenced at once and the limit could be fixed at \$150,000.

The CHAIRMAN. Could you not get along another year? What do you regard as the most important of these items?

Mr. KITCHIN. Allow me to add that this item says to cost not to exceed \$150,000.

Surgeon-General RIXEY. All of the public improvements asked for are considered of importance. The least important of the public works have been stricken out by the Bureau and the Secretary has

reduced others. It is believed that the best interests of the sick of the coast will be conserved by making the appropriation of \$75,000 during this session of Congress, in order that preparatory work may be started as early as possible.

The CHAIRMAN. How many will your present hospital accommodate?

Surgeon-General RIXEY. Seventeen is the number of beds, but they could put in twenty-five in an emergency.

The CHAIRMAN. Have you many sick there?

Surgeon-General RIXEY. During the year 224 patients were admitted, 191 for diseases and 33 for injuries, a total of 224.

The CHAIRMAN. Are you building any hospitals now?

Surgeon-General RIXEY. We are finishing up Annapolis, and it will be ready by the first of the year. We are getting plans for remodeling the Norfolk hospital.

The CHAIRMAN. Will you need that other \$100,000?

Surgeon-General RIXEY. Yes; next year.

The CHAIRMAN. But you will not need it until you are ready to make the payment?

Surgeon-General RIXEY. No.

The CHAIRMAN. Then you do not want it this year?

Surgeon-General RIXEY. The contract for the new wards and remodeling the old building, not to exceed \$200,000, will be let so soon as the architect's plans are in shape for advertisement and a suitable bid is received.

The CHAIRMAN. You have not yet started in on the work?

Surgeon-General RIXEY. The architects are getting the plans ready now.

The CHAIRMAN. How long will it take to do the work?

Surgeon-General RIXEY. It will take a couple of years.

The CHAIRMAN. "Naval hospital, Great Lakes: For the erection of naval hospital buildings (to cost not to exceed \$150,000), \$75,000." What about that?

Surgeon-General RIXEY. The new naval training station on the Great Lakes necessitates suitable provision for a naval hospital, which should be completed and ready for the reception of patients at as early a date as the other buildings on the station. The estimate of \$150,000 made by the Bureau of Medicine and Surgery will not be sufficient for the requirements of the station, according to Captain Ross and the architect who has charge of the plans for the station. A letter received from the architect states that the hospital, contagious ward, and quarters for officers will cost a total of \$250,000.

The CHAIRMAN. It seems to me that that is a good deal for a hospital.

Surgeon-General RIXEY. The plans of the station are for a certain type of building. The hospital and officers' quarters should correspond, and are estimated for on the same basis as the other buildings already appropriated for, the same architect making the estimates.

The CHAIRMAN. But you will not have to begin it this year, will you?

Surgeon-General RIXEY. It ought to be ready by the time the other buildings are. We ought not to send any men there until we have accommodations for the care of sick. Mistakes have been made in bringing men together without proper preparation, notably at Nor-

folk and League Island, with the result that much sickness developed and many deaths from infectious diseases occurred which could have been avoided by proper preparation before assembling the recruits.

The CHAIRMAN. That seems to be a good deal of money. What have you at Newport?

Surgeon-General RIXEY. A new hospital is needed at Newport now, and this station may be cited as an example of the above-stated danger of assembling recruits before adequate hospital facilities are provided. The present hospital was built under the Bureau of Navigation and on a plan that has not admitted of satisfactory expansion. It is a wooden structure added to from time to time as necessity required, until now further addition is impossible, and we have a patched-up, unsatisfactory building. In other words, it is a hospital inadequate and unsatisfactory, and can not be made to answer the purposes of the station without a new building.

The CHAIRMAN. How much did that hospital cost?

Surgeon-General RIXEY. I don't know; that was built before I came into the Bureau. But we have added to it from time to time. A building like that is a makeshift and the most expensive of all. In the establishment of a plant like the one on the Great Lakes it is cheaper in the long run to build buildings that will be permanent. I thought that officers' quarters would be furnished out of the general fund, but Captain Ross said that not a cent would go for officers' quarters that will be on the hospital grounds, and it will have to be out of money appropriated for the hospital. This would naturally increase the Bureau's estimate of \$150,000, and the architect's estimate is for \$250,000.

The CHAIRMAN. Do you not think that you can build a building that will answer the purpose for \$150,000?

Surgeon-General RIXEY. Not to correspond with the other buildings and build officers' quarters and contagious ward. I can put up a structure that will care for the patients, but not including the officers' quarters. You can build a hospital to care for the patients for \$75,000, but in a little while you would have to do something else with it. The hospital ought to correspond with the general plan.

The CHAIRMAN. They are building with red brick, I believe.

Surgeon-General RIXEY. I believe so.

The CHAIRMAN. The next is the naval hospital, Washington, D. C. For the erection of an addition, symmetrical with the northeast pavilion, solarium, and connecting corridor, to the naval hospital, Washington, D. C., \$60,000.

Surgeon-General RIXEY. The original estimate for that was \$200,000, and it was reduced in the Department to \$125,000, which amount was appropriated by the naval act of March 3, 1903. We want to add two additional wards, as it will double the capacity of the hospital. We had to cut off these wards in order to bring the building within the estimate.

The CHAIRMAN. Have you not got it finished yet?

Surgeon-General RIXEY. Except the two wards, for which an appropriation is now asked.

The CHAIRMAN. You have spent \$125,000?

Surgeon-General RIXEY. Yes, sir; and \$20,000 additional, making the cost of this hospital \$145,000.

The CHAIRMAN. You have the building all up?

Surgeon-General RIXEY. Yes; all up and in commission, and the present ward facilities are not adequate for the number of patients that should be cared for in the hospital.

The CHAIRMAN. Do you take in the naval men?

Surgeon-General RIXEY. Yes; officers and enlisted men.

In this hospital we take cases which are of special teaching value and are of great advantage to the class of young men who have recently entered the service and are pursuing their preparatory course at the Naval Medical School on the hospital grounds. This hospital brings these young men in touch thus early in their career with the special diseases and operative technique most interesting and important to them in the efficient performance of their subsequent duties. It is to be noted that the expenditure of \$60,000 for these two additional wards will practically double the capacity, and thus materially reduce the cost per patient, as the present building cost \$145,000.

The CHAIRMAN. Now you only care for the men and officers in the Navy?

Surgeon-General RIXEY. That is all.

The CHAIRMAN. No outsiders?

Surgeon-General RIXEY. No.

The CHAIRMAN. And no civilian employees?

Surgeon-General RIXEY. Yes; we take them in emergencies. We use a portion of the hospital for dispensary work, prescribing for officers' families, as well as for officers who are living at home.

This was done to save the expense of a large dispensary.

The CHAIRMAN. How much did that whole thing cost, all told?

Surgeon-General RIXEY. The grounds upon which this hospital is built were set aside for hospital purposes by the Department. The appropriation for building the hospital was \$145,000.

The CHAIRMAN. You were given something by another Department for that.

Surgeon-General RIXEY. On these hospital grounds is the building which accommodates the Naval Medical School and the board of examiners for medical officers for entrance and promotion in the Medical Corps. This building was the old Naval Observatory building and is adapted and used for examining board and post-graduate school purposes. This establishment is kept up for the purpose of making young medical officers entering the service acquainted with their duties as naval surgeons, and owing to the great difference between the practice of medicine ashore and afloat, the course given these young officers is of great importance. Of the diseases which they meet in the Tropics many of them are never seen by civil practitioners or taught in medical schools. The course given in this school in bacteriology, blood examination, etc., is entirely practical, and the young surgeon is shown how this work can be carried on under the disadvantages of ship life. The chemical work is practical and deals particularly with the qualitative and quantitative examination of water, food-stuffs, and pathological excretions. The course in tropical medicine is of inestimable value to the young man who has never visited the Tropics.

The CHAIRMAN. How much did our hospital cost at Annapolis?

Surgeon-General RIXEY. Two hundred thousand dollars.

The CHAIRMAN. Have you not got enough to enlarge it?

Surgeon-General RIXEY. When this hospital, which is now nearing completion, is finished, the \$200,000 appropriated will have been expended and three wards will have been omitted.

The CHAIRMAN. So you think you will have to add something on?

Surgeon-General RIXEY. I think it is more than probable.

The CHAIRMAN. How many boys are there there?

Surgeon-General RIXEY. Nine hundred and eighty-seven are authorized. At present there are 750 boys. This hospital will also accommodate the sick of the Navy who may be stationed at the academy, whether enlisted force or officers, and will also do emergency work for the civil employees.

The CHAIRMAN. The next is "Naval medical supply depot, Canacao, P. I.: For the erection of a building for the United States naval medical supply depot on the grounds of the naval hospital, Canacao, \$25,000."

Surgeon-General RIXEY. This depot has no building of its own. It is occupying detached parts of several buildings belonging to other departments of the navy-yard. During the past year its allotted space has been encroached upon to afford additional room for another department. In consequence medical stores received from the United States must be unpacked in the open air, and not until necessary for use, making proper inspection, accounting, and care thereof impossible, resulting in deterioration and loss. At this depot all medical supplies for the Navy in Asiatic waters are assembled and distributed. The immediate erection of a suitable building is imperatively necessary for the protection of public property. This I know from inspection on the ground. The stores are jammed in such shape that it is impossible to pack them and get them in condition to ship to other places. A new building ought to be on the hospital grounds, because there they will be more easily distributed and at least expense.

I would like to file the following statement in connection with my hearing:

No changes in the phraseology of the naval appropriation act for the fiscal year ending June 30, 1907, have been made in preparing the estimates for the fiscal year 1908, except that under appropriation "Contingent" the words "and rendezvous" have been omitted where provision is made for washing for stations and ships, the expenses of the maintenance of rendezvous being provided for under the appropriation "Recruiting" of the Bureau of Navigation.

The increase in the appropriations "Medical Department" and "Contingent," of \$15,000 and of \$5,000, respectively, is necessary to provide for the increased expenses incident to the enlistment of 3,000 additional men estimated for by the Bureau of Navigation. The increase of \$5,000 under the appropriation "Repairs" is necessary for the proper preservation and repair of naval hospitals dependent upon this appropriation for necessary repairs to hospital buildings and appendages, including roads, wharves, sidewalks, outhouses, fences, gardens, farms, and cemeteries. There will be in all seventeen naval hospitals dependent upon this appropriation for repairs during the fiscal year 1908.

Under public works the Bureau has submitted estimates for the construction, extension, and renewal of hospital buildings and appendages at (a) naval hospital, Norfolk, Va.; (b) naval hospital, Pensacola, Fla.; (c) naval hospital, Puget Sound, Washington; (d)

naval hospital, Great Lakes; (e) naval hospital, Washington, D. C.; (f) naval hospital, Canacao, P. I.; (g) naval medical supply depot, Cavite, P. I.

(a) *Naval hospital, Norfolk, Va.*—For the renovation of the present hospital buildings and the erection of new wards, cost not to exceed \$200,000, authorized by the act of Congress approved June 29, 1906, \$100,000. Of the \$200,000 authorized by the act just mentioned \$100,000 was appropriated for the fiscal year 1907.

(b) *Naval hospital, Pensacola, Fla.*—For the renewal of the present hospital buildings and for the erection of quarters for the medical staff outside the naval hospital, \$75,000. This hospital, a light frame structure, was built in 1875. General repairs are required, and the necessity for enlargement is urgent. During the past several winters its capacity has been overtaxed and the efficiency of service embarrassed. The importance of having this, the only naval hospital on the Gulf coast, in condition to accommodate the sick of our fleets when in winter rendezvous at that station is obvious.

(c) *Naval hospital, Puget Sound, Wash.*—For the erection of naval hospital buildings, the cost not to exceed \$150,000, \$75,000. The existing building was designed for the navy-yard dispensary and is therefore adapted neither for hospital use nor to the hospital requirements of the station. There is but one other naval hospital on the Pacific coast of the United States. Without more ample facilities at this station the Department will be unable to provide hospital accommodations for the sick of the Navy on the Pacific coast.

(d) *Naval hospital, Great Lakes.*—For the erection of hospital buildings to cost not to exceed \$150,000, \$75,000. The establishment of a naval training station on the Great Lakes necessitates suitable provision for a naval hospital, which should be completed and ready for the reception of patients at as early a date as the other buildings on the station.

(e) *Naval hospital, Washington, D. C.*—For the erection of an addition symmetrical with the northeast pavilion, solarium, and connecting corridor to the naval hospital, Washington, D. C., \$60,000. The original estimated cost of this hospital, \$200,000, was reduced in the Department to \$125,000, which latter amount was appropriated by the naval act of March 3, 1903. The lowest proposal received for the complete work, after advertisement, was \$24,000 in excess of the appropriation. In consequence of the unexpected increased cost of labor and material in the building trades the Bureau was compelled to omit from its final plans all provisions for the southeast pavilion symmetrical with the northeast pavilion. Another estimate was submitted to the Congress for \$60,000 to complete the building according to original plans and to erect the addition for which appropriation is now requested. Based upon this estimate of \$60,000, an appropriation of \$20,000 was made by the deficiency act of March 3, 1905. The erection of this addition is essential to the completion of the hospital and necessary for its sufficient enlargement to accommodate its quota of patients.

(f) *Naval hospital, Canacao, P. I.*—For the erection of additional wards, \$50,000, and for the erection of two quarters for the medical staff, \$20,000; in all, \$70,000. The present excellent hospital building is inadequate in size for the proper accommodation of the pa-

tients now being admitted. As this is the only naval hospital in the Philippine Islands, its enlargement is necessary.

(g) *Naval medical supply depot, Cavite, P. I.*—For the erection of a building for the United States naval medical supply depot on the grounds of the naval hospital, Canacao, \$25,000. This depot has no building of its own, but is occupying detached parts of several buildings belonging to other departments of the navy-yard. During the past year its already limited allotment of space was further reduced to afford additional room for another department. In consequence, medical stores received from the United States must be unpacked in the open air and not until necessary for use, making proper inspection, accounting, and care thereof impossible, resulting in deterioration and loss. At this depot all medical supplies for the Navy in Asiatic waters are assembled and distributed. The immediate erection of a suitable building is imperatively necessary for the protection of public property.

With reference to paragraph 6 of Department's circular letter, inviting attention to section 3663, Revised Statutes, which provides that full plans shall accompany any estimate submitted to Congress by the head of a department asking for any new specific expenditure, such as the erection of a public building, I have the honor to inform you that such plans have not been prepared in connection with this Bureau's estimates for public works, for the reason that the Bureau has no facilities for the preparation of plans and no appropriation from which the expenses thereof could be defrayed.

With reference to paragraph 2 of Department's circular letter, I have the honor to state that of the required annual appropriations under this Bureau, but one (Medical Department) is divided into subheads of appropriation. The following is a statement of the approximate amounts expended under the appropriations mentioned below during the fiscal year ended June 30, 1906:

Medical Department:	
Appropriated -----	\$255, 000
Expended for surgical necessities-----	\$165, 000
Expended for civil establishment -----	85, 000
	<hr/> 250, 000
Unexpended -----	5, 000
Naval hospital fund:	
Appropriated -----	40, 000
Entire appropriation expended.	
	<hr/> <hr/>
Contingent:	
Appropriated -----	55, 000
Expended (no subheads) -----	50, 000
	<hr/> 5, 000
Transportation of remains:	
Appropriated -----	10, 000
Entire appropriation expended.	
	<hr/> <hr/>
Repairs:	
Appropriated -----	45, 000
Expended (no subheads) -----	37, 000
	<hr/> 8, 000

Memorandum.—Estimates 1908, reduced by the Secretary on November 15, 1906:

Naval hospital, Pensacola, Fla., from \$75,000 to \$25,000-----	\$50, 000
---	-----------

I would like also to file the following statement in connection with my hearing, on the Hospital Corps matters.

The facilities for nursing the sick of the Navy at present are entirely inadequate and can not under the present organization be made satisfactory. It is absolutely essential that we have a reorganized Hospital Corps and give to pharmacists and hospital stewards the same pay as other warrant and chief petty officers receive. The hospital apprentices, upon whom the nursing devolves, can not be retained in the service as trained nurses with the inducements now offered them. These apprentices, whether hospital apprentices or hospital apprentices first class, are taught to do their work acceptably in about four years. At the expiration of this four years they are fairly competent nurses and can be relied upon to assist surgeons and do their nursing in a fairly satisfactory manner. What is needed now is greater inducement to retain them in the service. The bill now on the Calendar before the House (No. 12846), introduced by Mr. Roberts, has been passed upon by this committee and favorably reported. What it provides for is absolutely necessary to secure efficient nursing for our sick and injured.

The bill has been approved by three Secretaries of the Navy, and this Bureau has urged upon Congress the needs of the service for over three years. I hope that it will be possible to secure its passage at this session of Congress. If it goes over it means another year of difficulty in handling our sick and injured. Inefficient nursing means suffering for the sick and injured, and no matter how skilled your physician or surgeon may be, the want of trained nursing is sure to be felt. In the Army they have a large hospital corps organization, including trained women nurses and dental surgeons. In the Navy you give us only apprentices to do our nursing. The hospital stewards are men of drugs, first assistant to the surgeon in operations, giving anesthetics when required, and in general charge of the work of nursing aboard ship. These chief petty officers should have the same pay as other chief petty officers; at present they get \$60 per month, where other chief petty officers get \$75 per month. Hospital apprentices do the nursing, assist the surgeon in operations, and on board ship generally care for the sick quarters. These men should be trained carefully. Under present arrangement we can and do train them, and, as stated before, they remain through their first enlistment; but if any reenlist, they are apt to be those that are least efficient. Occasionally some good men reenlist, hoping for more favorable legislation.

Mr. KITCHEN. Doctor, is it your opinion that the entire medical service of the Navy ought to be put on practically the same basis as the service of the Army?

Surgeon-General RIXEY. So far as is practicable. The two services vary only so far as the medical service of the Navy has to be carried on in great part aboard ship, and there is greater need that the naval surgeon should have skilled nurses and assistants, for the reason that at sea he is deprived of consulting with other surgeons or of obtaining assistance in operations other than that furnished by the hospital corps of the Navy. The naval hospitals should have all that the Army has to carry on their work.

Mr. KITCHEN. Including the dental surgeons?

Surgeon-General RIXEY. We need dental surgeons in the Navy just as much, if not more, than the Army. There is no reason why enlisted men of the Navy should pay for dental work while the Army enlisted man has his work done free; nor is there any reason why the sick of naval hospitals should be deprived of women nurses while the Army has as many as needed. On the contrary, it is a distinct advantage to be able to utilize women nurses in our hospitals in cases of emergency, in order that we may send our men nurses aboard ship. Good men nurses are hard to obtain; good women nurses are always plentiful.

What we want is experienced men nurses in time of peace, and a nucleus of women nurses so that the hospitals can get accustomed to them.

The bills which would add materially to the efficiency of the Medical Department are: First in importance, House bill 12846, reorganization of the Hospital Corps, introduced by Mr. Roberts; second, Senate bill 2207, establishment of corps of women nurses, introduced by Mr. Hale; and third, House bill 13851, appointment of dental surgeons, introduced by Mr. Cousins.

UNITED STATES NAVAL HOSPITAL CORPS.

The recommendation of the Bureau to increase the warrant grade of the Hospital Corps from 25, now allowed by law, to 50 was approved by the Department and included in the provisions of Senate bill 2206 and House bill 12846 of the Fifty-ninth Congress, first session. The bill, however, failed to receive consideration. The increase in the warrant grade of the Hospital Corps proposed by this bill would encourage the most desirable hospital stewards to reenlist, and the authorization of the grade of chief pharmacist would give pharmacists the opportunity, now enjoyed by boatswains, gunners, carpenters, and warrant machinists, of promotion to the lowest commissioned grade.

The Naval Hospital Corps, since its organization in 1898, has proved a great advance toward providing for the Navy a body of trained nurses and hospital stewards. A constant effort has been made to secure for the corps and retain in the service men of sobriety, intelligence, aptitude, and fair education. It is discouraging to note, however, that a large number of the corps do not reenlist, and the Navy thus loses the services of many desirable men who have had four years' training and experience. New enlistments have not been sufficient to fill the vacancies thus created in the corps. While the demands of the service for men of the Hospital Corps have increased, their number has decreased. As present conditions do not attract men of the corps to reenlist and as the supply of recruits is not sufficient, it is therefore evident that without offering additional inducements in pay and in prospect of promotion it will be impossible to obtain for the corps the requisite number of recruits and retain in it experienced and trained men.

The monthly pay now allowed for hospital stewards is \$60; for hospital apprentices, first class, \$30, and for hospital apprentices \$20. The pay of the Hospital Corps was fixed by act of Congress which authorized the corps, but under present conditions this works serious injustice. It is imperative that legislation be enacted to settle

this question of pay in the Hospital Corps at once and for all and give it a share in the benefit of Executive orders, which have up to the present time increased the pay of chief petty officers of the line one-fourth above the chief petty officers of the Hospital Corps. Actual experience during the past eight years and careful study of the present and future needs of the service have convinced the Bureau that the correction of these unsatisfactory provisions of the law and reorganization of the Hospital Corps are imperatively necessary to secure and maintain a competent and efficient body of men for the care and treatment of the sick of the Navy. The necessity for reorganizing and increasing the efficiency of the Hospital Corps has been fully set forth by the Bureau in the last four annual reports.

An organization which will meet the present needs, permit ready expansion in the event of war, and secure an efficient Naval Hospital Corps is, in the opinion of the bureau, provided for in Senate bill 2206 and House bill 12846, Fifty-ninth Congress, first session.

Present condition of the Hospital Corps.

Rate.	Regular stations.	Special stations.	Total.	Enlistments.	Short.
Hospital stewards	229	24	253	223	30
Hospital apprentices, first class.....	270	16	286	260	26
Hospital apprentices	383	45	428	272	156

No allowance is made for the commissioning of new ships or exigencies such as is now the case in Cuba, where 20 hospital corps men are stationed.

Reasons for present condition.—1. The rating of apothecary, (hospital steward), was established December 8, 1866, with pay at \$60 per month; there has been no legislation increasing this pay since that date.

2. The pay is insufficient and the prospects of advancement which should be held out as an inducement is not adequate to attract and hold experienced and trained men.

3. The fact that the Hospital Corps is deprived of the benefits of Executive orders increasing the pay of all other enlisted men of the Navy. In this connection it is to be noted that the benefits of added compensation for trained men provided for by the Executive orders of June 26, 1903, and, just recently, November 28, 1906, are not shared by the members of the Hospital Corps.

Remedy for present condition.—(1) Senate bill 2206; (2) House bill 12846.

Estimated increased cost should House bill 12846 become a law.

PHARMACISTS.

(a) Present number, with highest pay, total per year.....	\$43,000
(b) With increased number according to bill, including chief pharmacists	75,180
(c) Total increase per year.....	\$32,180

HOSPITAL STEWARDS.

(a)	Present number, with highest pay, total per year-----	164, 160
(b)	With total increased pay according to bill-----	166, 400
(c)	Total increase per year -----	2, 240

HOSPITAL APPRENTICES, FIRST CLASS.

(a)	Present number, with pay, total per year-----	7, 260
(b)	With total increased pay per year-----	10, 690
(c)	Total increase per year-----	3, 430
	Total increase for entire corps-----	37, 850

NOTE.—This does not represent any increase over the other enlisted personnel, but merely places all on an equality of footing.

BENEFITS FROM PROPOSED REMEDY.

1. *To the service.*—(a) Allay serious dissatisfaction among the members of the Hospital Corps.

(b) Will stimulate reenlistments and offer inducements to a class of men (trained nurses) now impossible to induce to enter the service.

(c) Will insure an efficient nursing staff for the service and an intelligent, efficient organization for those important duties of assistant to the surgeon in operations and preventive medicine. The Hospital Corps must be relied upon for all the medical and surgical nursing aboard our battle ships and cruisers and at our hospitals. They must be competent to assist in surgical operations and with the technique of antiseptic work, whether aboard ship or on shore. As these men are trained so will our success be in saving life in and after battle. Besides, in preventive medicine, especially in the Tropics, the trained men are invaluable in keeping the personnel in good condition.

[No. 6.]

NAVAL ACADEMY—STATEMENT OF REAR-ADMIRAL JAMES H. SANDS, SUPERINTENDENT, ACCOMPANIED BY PROF. O. G. DODGE.

COMMITTEE ON NAVAL AFFAIRS,
Friday, December 14, 1906.

The committee this day met, Hon. H. C. Loudenslager in the chair.

The ACTING CHAIRMAN. On page 156 of the bill I see you have stricken out the word "chemistry" and inserted the word "drawing."

Admiral SANDS. I asked subsequently, but it does not appear here, that the name should be changed to professor of mechanical drawing, to agree with the modern title for that work. The professor of chemistry has been appointed a professor of mathematics in the Navy and he continues to do the same work, and consequently the position of professor of chemistry on the civil list is not needed any longer.

The ACTING CHAIRMAN. This is really a new office?

Admiral SANDS. Which one?

The ACTING CHAIRMAN. The professor of drawing.

Admiral SANDS. It was professor of drawing before, but under a less salary. It is a promotion of the professor of drawing from \$2,200 to \$2,500.

Mr. BUTLER. You no longer need the professor of chemistry?

Admiral SANDS. No, sir.

Mr. BUTLER. And the appropriation for him may be stricken out?

Admiral SANDS. No, sir. We ask that the title be changed to professor of mechanical drawing, to allow a promotion, and that the position of professor of drawing at \$2,200 be dropped.

The ACTING CHAIRMAN. That is practically an advance of \$300?

Admiral SANDS. It is a saving, because the one at \$2,200 is cut out.

The ACTING CHAIRMAN. The old professor of chemistry is still drawing \$2,500?

Admiral SANDS. He is in the Navy; he is not a civilian appointee any longer.

The ACTING CHAIRMAN. You ask that this title be made professor of mechanical drawing; why is that?

Admiral SANDS. In order that the title may agree with his work, because it is not any longer free-hand drawing or sketching.

Mr. KITCHIN. What duties did this professor of chemistry perform?

Admiral SANDS. He was the professor of chemistry in the department of physics and chemistry.

Mr. KITCHIN. Do you mean that chemistry will be no longer taught?

Admiral SANDS. No, sir. We will not have a professor of chemistry, but the man who formerly held that position and who is now in the Navy as a professor of mathematics will probably do the same work.

Mr. KITCHIN. Under the title of professor of mathematics he will really do the work of the professor of chemistry?

Admiral SANDS. Yes, sir.

Mr. KITCHIN. Would it not be better to retain the title professor of chemistry?

Admiral SANDS. No, sir; because he has been nominated and confirmed by the Senate and belongs to the Navy proper. This man was a civilian. I have professors of mathematics assigned for teaching languages and history.

Mr. KITCHIN. Can not the man be in the Navy and teach chemistry?

Admiral SANDS. That is what we are doing now.

Mr. KITCHIN. What would be the objection to calling him a professor of chemistry?

The ACTING CHAIRMAN. We do not pay him and therefore he will not be included in the bill.

Admiral SANDS. You do not appropriate for him; the Navy proper provides for him.

Mr. BUTLER. He gets in the bill under "Pay of the Navy?"

Admiral SANDS. He does not appear here.

Mr. KITCHIN. He will now be paid under one of the first items in the bill?

Admiral SANDS. Yes, sir. He does not come under the Navy Academy appropriation at all. He is paid from "Pay of the Navy."

Mr. KITCHIN. Have you other professors who are under the Navy and who are styled professors of mathematics and who teach other branches?

Admiral SANDS. Yes, sir.

Mr. KITCHIN. What other branches?

Admiral SANDS. English, modern languages, and mathematics. Those are the three.

Mr. KITCHIN. In your judgment, would it not be advisable to amend the law so that these men would be called professors of the branches which they teach, even after they are in the Navy?

Admiral SANDS. I do not think so, because we have civilian professors detailed for that work and paid from this appropriation. The Navy Department itself has a recommendation to make in regard to all the professors, which would cover that point without changing it in the Naval Academy appropriation.

Mr. KITCHIN. On its face it looks inconsistent to call a man professors detailed for that work and paid from this appropriation.

Admiral SANDS. Mr. Bonaparte has recommended that they be called academic professors and let them teach what we may choose, but that is in his annual report to the President, and we do not know what is coming of it.

Mr. KITCHIN. Your own judgment is that the recommendation of the Secretary is a wise one?

Admiral SANDS. Yes, sir; I think so.

Mr. BUTLER. Then, if the suggestion of the Secretary of the Navy should be adopted they would all be known as academic professors?

Admiral SANDS. Yes, sir.

Professor DODGE. They are simply called professors at West Point.

Mr. BUTLER. And these men will be assigned according to their qualifications?

Admiral SANDS. The law says now that they may be assigned to any duty that the Secretary may direct.

Mr. BUTLER. This professor of chemistry, as I understand, has gone into the line of the Navy?

Admiral SANDS. The staff of the Navy, not the line. He is the same as Professor Dodge, with less rank.

The ACTING CHAIRMAN. The next change is the reduction of one professor and is on account of a promotion?

Professor DODGE. Yes, sir.

The ACTING CHAIRMAN. The next change is on page 157 of the bill, where you ask for two additional instructors?

Admiral SANDS. That is because we can not get officers and to give some advance to the men who have worked faithfully there, and so instead of putting in two more men at \$1,500, I asked for the higher salary in order to promote the men there. It is valuable for the academy to keep men who have degrees and whose services at the academy have been faithful.

Mr. BUTLER. They are civilians?

Admiral SANDS. Yes, sir; civilians under yearly appointment.

Mr. KITCHIN. As I understand, all whose compensation is provided for under the head of Naval Academy are civilian employees?

Admiral SANDS. Yes, sir.

Mr. BUTLER. How much are the two professors who will be promoted receiving now?

Admiral SANDS. The instructors. One is drawing \$2,200 and will be dropped down to \$2,000, and the other is drawing \$1,500 and will be moved up to \$2,000.

Mr. BUTLER. How about the one who is dropped?

Admiral SANDS. That is a temporary appointment under this year's appropriation, which will run him up to June. He was put into that position because it was vacant, and if we do not get this appropriation he will be dropped down to \$1,500, but I think he is too valuable and I only want to drop him to \$2,000.

The ACTING CHAIRMAN. Where is he now provided for?

Admiral SANDS. In the second paragraph.

The ACTING CHAIRMAN. I thought we took him and put him up to \$2,200.

Admiral SANDS. The man appropriated for as the professor of chemistry went into the Navy as a professor of mathematics, and that created a vacancy several months ago, and instead of letting that salary lapse the professor of drawing was promoted, and an instructor was promoted to the position at \$2,200. Now, if there is no legislation making a vacancy next year he drops out of the academy altogether.

Mr. BUTLER. If this shifting about takes place, it will leave, then, two vacancies, as I understand, in the lower grade of instructors?

Admiral SANDS. Yes, sir.

Mr. BUTLER. These two places will be filled by others who are not now in the service?

Admiral SANDS. Not now in the service.

The ACTING CHAIRMAN. Last year we provided for 9 in these two first paragraphs. Now, this year we provide for 8, which is 1 less, and that other 1 is provided for in the Navy, which makes 9?

Admiral SANDS. There are 9 there now, the vacancy being filled up to next June.

The ACTING CHAIRMAN. That leaves one of the men out of a job?

Admiral SANDS. No; he will be a \$1,500 man if you do not give him a \$2,000 position.

The ACTING CHAIRMAN. We took care of that man in the other paragraph.

Professor DODGE. But the vacancy that was made has also been filled.

Admiral SANDS. We appointed another man to fill the place, but instead of letting him drop down to \$1,500 I want to drop him to \$2,000.

The ACTING CHAIRMAN. Where do you cut out the \$1,500 man?

Admiral SANDS. I do not; I am asking for two more men.

The ACTING CHAIRMAN. At \$2,000 a year?

Admiral SANDS. Yes, sir. One of the men I am going to put there is drawing \$2,200.

Professor DODGE. We drop one at \$2,200 and add two at \$2,000.

The ACTING CHAIRMAN. The \$2,200 man is getting more money?

Professor DODGE. No, sir.

The ACTING CHAIRMAN. I mean out of the pay of the Navy.

Professor DODGE. That is filling a vacancy. Somebody died or retired and the vacancy was filled by this appointment. It was not a position created.

Admiral SANDS. He filled a vacancy caused by retirement.

The numbers and pay of civil professors and instructors now allowed and requested for next year are as follows:

	Now allowed.			Requested.		
	No.	Amount.	Total.	No.	Amount.	Total.
Professors.....	1		\$3,000	1		\$3,000
Do	5	\$2,500	12,500	5	\$2,500	12,500
Do	4	2,200	8,000	3	2,200	6,600
Instructors.....	3	2,000	6,000	5	2,000	10,000
Do	4	1,800	7,200	4	1,800	7,200
Do	10	1,500	15,000	10	1,500	15,000
Total.....	27		52,500	28		54,300

This shows an increase of one in the number allowed and of \$1,800 in the total appropriation for this purpose.

It is suggested to the committee that requests for change of title may be avoided by omitting the subject which they are to teach and appropriating simply for professors, as is now done for instructors. They will then be appointed by the Secretary of the Navy as "professors" (at the Naval Academy), and will be assigned by the superintendent to the department needing their services. This is the exact method followed in the case of all instructors and the system works satisfactorily.

The ACTING CHAIRMAN. The next change is one cataloguer at \$1,100. That is new?

Admiral SANDS. In accordance with the recommendations of a board which I appointed to consider the needs of the library, and also in conformity with the later report of the board of visitors, the following organization of the library staff was recommended to the Department:

	No.	Amount.	Remarks.
Assistant librarian	1	\$1,800	Now allowed.
Cataloguer	1	1,200	Requested.
Shelf assistant (title changed).....	1	1,000	Now allowed as assistant librarian.
Shelf assistant.....	1	900	Requested.

The increase is 1 cataloguer at \$1,200, and 1 shelf assistant at \$900. The title of the assistant librarian at \$1,000 is changed to shelf assistant to conform with his duties, and to place him below the higher paid cataloguer.

The wording of the appropriation should be as follows:

* * *; one assistant librarian, at one thousand eight hundred dollars; one cataloguer, at one thousand two hundred dollars; one shelf assistant, at one thousand dollars, and one at nine hundred dollars.

The library now has 47,000 volumes, and is increasing at the rate of about 1,000 volumes per annum. In its present restricted quarters it is frequently used by over 200 midshipmen at the same time. The catalogue is obsolete in form, and the older part has faded out so that it is of no further use. The whole library should be recatalogued, using the standard card of the Library of Congress, which has become almost universal in large libraries.

Exclusive of the professor of English, who is detailed as librarian, this will give a staff of 4 assistants to do all the work of a library of 50,000 volumes, used by 800 to 900 midshipmen, in addition to the officers and professors of the academy.

I asked for \$1,200 for the pay of this cataloguer, upon the report of the board which was ordered upon the needs of the library. That sum was changed in the Department. I do not know why. Then right below, under the title "Shelf assistants," the pay of one man was reduced \$100. He is now getting a thousand dollars. I only asked for a change of title in his case, and in changing his title they dropped him down \$100 a year.

Mr. BUTLER. Why did you suggest a change in title?

Admiral SANDS. Because there are 47,000 volumes in the new library and I wanted to get it on a proper working basis at once, and that is the usual designation for all libraries with a limited number of people.

Mr. BUTLER. The man will do the same work?

Admiral SANDS. Yes, sir.

Mr. BUTLER. Then why change the title when he is going to do the work?

Admiral SANDS. It is simply the report of this board that was ordered. After correspondence with various libraries they reported that that would be the proper way to reorganize the library.

Mr. BUTLER. This library is supported out of the appropriation of \$3,000?

Professor DODGE. Only about \$2,500; \$500 goes for text-books.

The ACTING CHAIRMAN. This position of cataloguer is new?

Admiral SANDS. Yes, sir; entirely.

The ACTING CHAIRMAN. What is the need of it?

Admiral SANDS. We would like to get somebody to catalogue the library and we want to give him the same title as in other libraries.

The ACTING CHAIRMAN. Who has been doing that work?

Admiral SANDS. Nobody.

Mr. DAWSON. Would the assistant librarian be competent to fill the position?

Admiral SANDS. The cataloguing of libraries is now done by experts in that work. The position should be filled by the appointment of such an expert.

Mr. DAWSON. You drop one assistant at \$1,000. Will you put him in the position of cataloguer?

Admiral SANDS. The board has recommended that the title of the assistant librarian at \$1,000 be changed to "shelf assistant." I am following the report of the board, which has been included in the report of the board of visitors, and which contains the recommendations of the board of visitors. They read it over and they concluded that that was the best way to reorganize the library force.

Mr. KITCHIN. Is this cataloguer to be a permanent position?

Admiral SANDS. Yes, sir.

Mr. KITCHIN. By about what number of books is the library increasing annually?

Admiral SANDS. I can not tell you.

Professor DODGE. I think the library report gives the total increase.

Mr. BUTLER. When you revise your testimony please put it in.

The ACTING CHAIRMAN. Two thousand five hundred dollars a year is spent on it?

Admiral SANDS. Yes, sir; I think so.

Professor DODGE. About a thousand volumes a year has been the average increase for the last thirty-five years, and that is probably a good estimate—a thousand volumes a year.

Admiral SANDS. The man has five years' work ahead of him in cataloguing.

Mr. KITCHIN. That is the reason I asked if it was to be a permanent position.

Admiral SANDS. Yes, sir; he would be busy keeping the catalogue corrected all the time. It seems to me it would be well worth the pay of a man to do that.

The ACTING CHAIRMAN. The next change is the two shelf assistants, at \$900 each?

Admiral SANDS. One of those men is getting a thousand dollars now, and we asked for a change of title.

The ACTING CHAIRMAN. They gave you an extra man?

Admiral SANDS. They reduced his salary \$100, and that is something I did not ask for. I would rather keep him with the same title and have him keep his pay.

Mr. BUTLER. Under what title was the man paid?

Admiral SANDS. As assistant librarian, at \$1,000.

Mr. BUTLER. I thought the cataloguer was going to take that position.

Admiral SANDS. I do not know as to that. I would like to have the pay restored to what I recommend it and the thousand dollars restored to the man who is getting a thousand dollars now. I do not want him reduced.

Mr. DAWSON. He is in the current law as assistant librarian, at \$1,000?

Admiral SANDS. Yes, sir.

Mr. KITCHIN. It may be well to leave him at \$1,000 and put the other man in as one shelf assistant?

Professor DODGE. Then the assistant librarian would be ranked by the cataloguer.

The ACTING CHAIRMAN. The next change is on page 158, "One mechanic in the department of ordnance, at \$751.20?"

Admiral SANDS. That is absolutely necessary in order to care for the arms in the armory. The armory is a large place and the arms are not properly cared for. There is no possible way of preventing mischievous persons from carrying off what they want, and the arms can not be kept clean and in repair for 800 midshipmen.

The present armory force and the increase asked is shown in the following table:

1 mechanic (allowed), at_____	\$951. 52
1 mechanic (requested), at_____	751. 20
1 armorer (allowed), at_____	649. 50
1 chief gunner's mate (allowed), at_____	529. 50
1 quarter gunner (allowed), at_____	469. 50
2 quarter gunners (requested), at \$469.50 each_____	939. 00
4 attendants (allowed), at \$300 each_____	1, 200. 00
Total_____	5, 490. 22

They have the care of a building (the armory) 100 by 420 feet, containing six class rooms, two offices, a testing room, a shop, toilets, and a drill floor 100 by 350 feet. They also care for the small arms (about 1,000 rifles, revolvers, etc.) and equipment, the field artillery pieces, and the great guns, mounted in a shed outside. The force, if increased as requested, will be very small for the amount of work to be done.

The ACTING CHAIRMAN. What is the use of all that language? You could just say, two mechanics, one at \$951.52 and one at \$751.20.

Professor DODGE. That whole appropriation could be revised. That was brought about by one item being put in at a time.

Admiral SANDS. We tried that last year, but it was found that they could not make comparisons with comfort, and they went back to the old system in order to see what the changes were.

The ACTING CHAIRMAN. You will have no more cadets next year than this year?

Admiral SANDS. Yes, sir; there will be more, but not many more.

Mr. KITCHIN. I think we either ought to put these salaries at some round number or else we ought to keep the per diem in instead of the total. For instance, here is one mechanic at \$751.20?

Professor DODGE. I do not remember the rate. That is probably estimated on a certain amount per day for three hundred and thirteen days. It amounts to \$2.40 per day.

Mr. KITCHIN. It seems to me it would be better to pay a per diem employee at so much a day, and if he is really an annual employee then he ought to be paid an annual salary, and put it down in round

dollars and not cents. I notice also lower down on the page that one man's salary is increased 18 cents over last year?

Professor DODGE. I will explain that. There is an increase of two quarter gunners. When the estimate was submitted to the superintendent it was at the rate of \$469.68, and the pay of the third man was made to agree with it in order to make one item of the three quarter gunners. The annual salary of \$469.50 is at the rate of \$1.50 per day and should be retained.

Admiral SANDS. If you have a per diem man you can not work him at all times without falling foul of the Civil Service Commission, and sometimes it is necessary to call on them for work at night.

Professor DODGE. Eight hours is a day's work for per diem employees, and then we can not call on them for anything more.

Mr. KITCHIN. Does that same thing apply to your annual employees?

Professor DODGE. No, sir.

Mr. KITCHIN. I thought for overtime they got paid.

Professor DODGE. We have a specific annual appropriation, and therefore no money to pay them overtime.

Mr. BUTLER. What duties will this mechanic have to perform?

Admiral SANDS. He has to keep the arms in repair, superintend the cleaning of the house; and also he has the batteries to look out for, all different caliber guns, all that work—everything in the ordnance department in the way of mechanical appliances.

The ACTING CHAIRMAN. It seems to me the gist of the whole matter is whether you will have more ordnance or more cadets next year.

Admiral SANDS. It is the same material.

The ACTING CHAIRMAN. Is it deteriorating now?

Admiral SANDS. It will if we do not get somebody to take care of it.

The ACTING CHAIRMAN. Is it not taken care of now?

Admiral SANDS. Not as it should be. It is not being taken care of.

The ACTING CHAIRMAN. You have not enough assistants?

Admiral SANDS. No, sir.

The ACTING CHAIRMAN. That is the need?

Admiral SANDS. Yes, sir. I have a comparative statement of the Military and Naval academies showing that for half the number of cadets the Military Academy gets \$60,000 more appropriation, and it is not to be supposed that they are receiving any more than they absolutely need.

The ACTING CHAIRMAN. The reason for that is you have not enough force?

Admiral SANDS. No, sir; we have not.

Mr. BUTLER. The cadets have not the time to do the work?

Admiral SANDS. They can not do anything. They are continually engaged with their studies. They have not time to do anything. They are worked harder than any men I know of.

Mr. LILLEY. I think you are right.

Admiral SANDS. There is no question about it.

The ACTING CHAIRMAN. You ask for two additional quarter gunners?

Admiral SANDS. They are asked for for the same reason.

The ACTING CHAIRMAN. Why should that item be increased two and the other one?

Admiral SANDS. It is an increase of three.

Mr. BUTLER. What is a quarter gunner?

Admiral SANDS. A man who looks out for the arms and keeps the armament in order. The naval title is of a man who has charge of a certain battery. The higher positions are the ones that keep them in repair, and the lower ones are those who clean them, and if intelligent enough they help also to repair them.

Mr. BUTLER. Have you had force enough in this department to do the work?

Admiral SANDS. No, sir. We have not force enough in any department to do the work.

The ACTING CHAIRMAN. The arms are in only about 33 per cent of order at the present time?

Professor DODGE. There is the present force [exhibiting paper].

The ACTING CHAIRMAN. How many quarter gunners have you now?

Admiral SANDS. Only one.

The ACTING CHAIRMAN. That is the one you call chief gunner's mate?

Admiral SANDS. No; the item is right below that.

The ACTING CHAIRMAN. You have one and you ask for three to perform the necessary work, which would be indicative to my mind that at the present time only 33 per cent of it is being done.

Admiral SANDS. The men that we have must work very hard to keep the property in fairly serviceable condition.

Professor DODGE. They work on all kinds of work—cleaning up the building, etc.

Mr. LILLEY. This is the only Government place I have been to where they did not have enough help to do the work properly.

The ACTING CHAIRMAN. The next item is "three seamen," on page 159 of the bill.

Professor DODGE. That is not an increase. They are already in the bill. You will find farther down in the bill two seamen stricken out.

The ACTING CHAIRMAN. The next item is an increase of four attendants at recitation rooms.

Professor DODGE. There are two stricken out right above. It is only an increase of two.

The ACTING CHAIRMAN. That is an increase of two?

Professor DODGE. Yes, sir.

The ACTING CHAIRMAN. They are needed for the same reason?

Admiral SANDS. That is the least possible number that we can get along with: yes, sir.

The ACTING CHAIRMAN. On page 160 of the bill you are asking for one printer at \$720 and one printer at \$480?

Admiral SANDS. Because the Navy Department is going to withdraw the printers we have now and leave me with none. We have to do a great deal of printing and we will have no means of doing it.

Mr. BUTLER. Have you not an appropriation now for a printer?

Admiral SANDS. No, sir; we have an enlisted man.

Mr. BUTLER. And the Navy Department proposes to withdraw that man?

Admiral SANDS. We have a printer, who is a yeoman, and a voluntary devil who is learning the trade, and the Navy Department is going to withdraw the yeoman from us.

Mr. BUTLER. Why?

Admiral SANDS. They are taking everybody, and we must depend upon ourselves. They will give me no man.

Mr. BUTLER. Why do they throw you entirely upon your own resources?

Admiral SANDS. They wish to send the men to sea.

Mr. DAWSON. You have a printing plant there?

Admiral SANDS. Yes, sir. We only ask for a small force.

The ACTING CHAIRMAN. How is this other man paid now?

Admiral SANDS. He is not being paid. He is simply helping us out.

The ACTING CHAIRMAN. Without any compensation?

Admiral SANDS. Yes, sir.

The ACTING CHAIRMAN. Does this appropriation provide for him?

Admiral SANDS. Yes, sir; him or some one equally as good.

Mr. BUTLER. What sort of printing do you have to do?

Admiral SANDS. General orders of all kinds, and they are constant, every day, and the little work that pertains particularly to the academy and not to the outside.

Mr. BUTLER. This printing is absolutely necessary for the conduct of the academy?

Admiral SANDS. Yes, sir.

Mr. DAWSON. Do you print your own blanks?

Admiral SANDS. Yes, sir; all the blanks. Just the other day I had to distribute 1,000 general orders, which I could not have done if I did not have a printing press. I gave the printer the typewritten copy, and he set it up and ran it off in two hours.

The ACTING CHAIRMAN. The Committee on Printing is endeavoring, so far as possible, to center all the printing at one establishment, and is steadily advancing on that ground that all the Government printing must be done at one place.

Admiral SANDS. Sometimes the need is sudden. For example, a doctor reports to me that a certain house has smallpox and it is necessary to quarantine it. I have to get out an order immediately and that order has to go to everybody connected with the academy within 2 miles, and it has to go out at once; that could not be done if I had to make the requisition on the Government Printing Office.

The ACTING CHAIRMAN. You could have those in blank with everything except the house.

Admiral SANDS. Somebody would have to print that in.

The ACTING CHAIRMAN. It could be written in.

Admiral SANDS. Then I would have to get another clerk, which would cost more. We have been trying to get a new clerk through the Civil Service Commission, but nobody is willing to come for the pay that we offer.

At this point I wish to call the committee's attention to the necessity of a small clerical force for duty in the academic departments. The clerical work of these departments has heretofore been done by the officers and instructors, but has now become so great that an increase in the number of instructors will be necessary unless other provision is made to take care of it. Instead of submitting an increase in the number of instructors to the Secretary I asked for four clerks for eight departments, at \$1,000 each, as the cost would be less. This

item was eliminated from the estimates by the Secretary, but should be allowed by the committee for the above reasons, as follows: "Four clerks at \$1,000 each, \$4,000."

The ACTING CHAIRMAN. On page 161 there is a reorganization and reclassification of the musical people at the academy?

Admiral SANDS. The idea is to reorganize the band.

The ACTING CHAIRMAN. I thought we raised the pay a year or two ago?

Professor DODGE. You did raise the pay a few years ago.

Mr. BUTLER. Is not the music good enough?

Admiral SANDS. It is not a question of that, it is a question of the people who have been in the service, two of them a great many years, and when the time comes for them to drop out they do not go on the retired list, but drop out completely, and they have been before Congress for relief a number of times. It was suggested that this legislation would put the band upon a proper footing and take care of those people when they grew old. One man has been there about forty-two years, and he is now ready to drop out.

Mr. BUTLER. Do they get the civilian pension?

Admiral SANDS. The Navy Department is not willing that those people should come in and get the benefit of pensions, although they have been doing military duty all these years, and for a number of years they have been of the opinion that they were in the Navy, but when this question of pension came up it was found that they were not in the Navy.

Mr. DAWSON. Our committee looked into that some last year, and my recollection is that this provision does not yet bring it up to the same standard as the band at the Military Academy?

Admiral SANDS. No, sir. The band is made up partly of enlisted men and partly of civilians, and at any time the enlisted part may be taken and sent off to sea and bring our band down to two-thirds its present size. It is rather a small band for a brigade of nine hundred or a thousand midshipmen. It is not adequate.

The ACTING CHAIRMAN. What pay does an ensign in the Navy get?

Professor DODGE. It is \$1,540. It is \$1,400 for a man coming in from private life and 10 per cent for five years, \$1,540.

The ACTING CHAIRMAN. Does he not get for every five years a still further increase?

Professor DODGE. Yes, sir; up to 40 per cent.

The ACTING CHAIRMAN. How much would this man draw if all his service was credited?

Professor DODGE. About 40 per cent. I should judge he had been there about twenty years.

The ACTING CHAIRMAN. About \$2,000?

Professor DODGE. Yes, sir; \$1,960.

The ACTING CHAIRMAN. What is the pay that these 33 musicians would be entitled to—that is, what is the difference in pay?

Professor DODGE. I have not that information.

Mr. DAWSON. The old band provided for 29 musicians and this provision is for 46?

Admiral SANDS. The old band had to furnish music for a length of line of 300 midshipmen; now it has to go three times the length of that line, and it requires a greater volume of sound.

Professor DODGE. There are 16 enlisted men in addition.

Mr. DAWSON. That would make it practically the same number as you have now?

Professor DODGE. Yes, sir; we are merely putting these men on a common basis.

Mr. DAWSON. You say that 16 are enlisted?

Admiral SANDS. Yes, sir; they are in the service, and when their time expires and they are ready to be reenlisted they must be sent to another place; we can not keep them.

Mr. BUTLER. Why?

Admiral SANDS. They want them at sea.

The ACTING CHAIRMAN. What would these men get under this plan?

Professor DODGE. It depends on their length of service.

The ACTING CHAIRMAN. Just on the first enlistment; that is, without allowing any additional pay for reenlistment?

Professor DODGE. Twelve thousand five hundred and forty dollars is the present pay of the civil band and \$18,848 with the enlisted force.

The enlisted band proposed, neglecting the small increase for length of service, would cost \$19,192 per annum, an increase of \$344. The following table gives the estimate in detail:

PROPOSED BAND.

Band leader	\$1, 960
Second band leader.....	600
33 musicians, first class, at \$32 per month.....	12, 672
11 musicians, second class, at \$30 per month.....	3, 960
Total proposed cost.....	19, 192

PRESENT BAND.

Civil force:	
Band master.....	\$1, 200
21 first-class musicians, at \$420 (\$35 per month).....	8, 820
7 second-class musicians, at \$360 (\$30 per month).....	2, 520
	12, 540
Enlisted force:	
1 band master, at \$52 per month.....	624
1 first musician, at \$36 per month.....	432
8 musicians, first class, at \$32 per month.....	3, 092
6 musicians, second class, at \$30 per month.....	2, 160
	6, 308
Total present cost.....	18, 848

Mr. LILLEY. What other means of livelihood have these musicians? Do they work at other trades?

Professor DODGE. Yes, sir; shoemaking and various other trades. They also play at the theater.

The ACTING CHAIRMAN. Would they continue to do that if enlisted?

Admiral SANDS. I do not know. We only work them four hours a day as a rule——

The ACTING CHAIRMAN. Why should they be enlisted?

Admiral SANDS. We want to get them on a sound basis, so that we can get the best men possible to furnish the music; and with the prospect of something afterwards in the way of retirement we can get better men and have them under military discipline.

The ACTING CHAIRMAN. If they have the benefits of retirement and all the benefits of an enlisted man, should they not also have the incumbrances of an enlisted man?

Admiral SANDS. No, sir. We want to keep these men at the Naval Academy, the idea being to raise as far as possible the tone of the Naval Academy and to have the very best that is obtainable for the academy in order that the best men will always be trying to get there and give us the best for the education of the midshipmen.

The ACTING CHAIRMAN. That means completely under military discipline and under your care and sight?

Admiral SANDS. Yes, sir.

The ACTING CHAIRMAN. And not go out and make some other compensation?

Admiral SANDS. There is nothing to prevent an enlisted man on liberty from working at anything he pleases for compensation.

The ACTING CHAIRMAN. But they do not get liberty every day?

Admiral SANDS. These men all sleep outside the academy and have their families outside. A man is not going to live around a place long without having somebody to comfort him. Before passing to the next appropriation I wish to call the committee's attention to the appropriation for mess men. The Navy Department has decided that I can not have any mess attendants for the midshipmen afloat to be supplied from the naval appropriation, and I do not know how these midshipmen are to be served on board the practice ships. The law says if enlisted men are discharged for any cause but physical disability they must return the clothing outfit, and the cost of this outfit is just exactly what their wages are for three months; and therefore they would serve three months with no pay at all. You can not expect any man to do that, and I do not know how we are going to get along, unless we can have them enlisted at the Naval Academy for special service.

Mr. LILLEY. Have you studied the subject of competent waiters and help in the mess?

Admiral SANDS. Yes, sir.

Mr. LILLEY. Have you asked for it here?

Admiral SANDS. I have given the whole statement here and I have asked for nothing.

Mr. LILLEY. Why do you not ask for it?

Admiral SANDS. I did not expect to come up here until the 15th of January, and I did not get my remarks in condition to present to you before I was summoned to this hearing. I submit herewith a comparative statement of the present cost of mess men and the cost if the same positions are filled by enlistment, which shows that the only additional expense to the Government is that due to relieving the midshipmen of a charge of about \$8,000.

The appropriation now made by Congress for employees of the mid-

Total expense_____	39, 291. 50
The cost of mess men enlisted for the practice cruise was_____	8. 166. 00
<hr/>	
Total expense to Government_____	30, 831. 50
Expense of midshipmen for additional help_____	8. 460. 00
<hr/>	
Total expense_____	39, 291. 50

To provide an enlisted force to replace the civil list will require the following employees:

2 chief commissary stewards, at \$70_____per month---	\$140
1 commissary steward_____do---	60
5 stewards, at \$50_____do---	150
2 stewards, at \$35_____do---	70
3 ship's cooks, first class, at \$55_____do---	165
21 ship's cooks, fourth class, at \$25_____do---	525
5 mess attendants, first class, at \$24_____do---	120
100 mess attendants, third class, at \$16_____do---	1, 600
2 bakers, first class, at \$45_____do---	90
1 baker, second class_____do---	35
	<hr/>
	2, 955
Increased pay of 5 mess attendants as stewards for cruise_____	220
	<hr/>
Total per month_____	3, 175
Total per annum_____	38, 100

To carry out the above recommendations the following legislation is suggested, to be substituted for the estimate for stewards, cooks, waiters, etc., as shown on the draft of the bill now before the committee:

Pay of stewards, cooks, bakers, mess attendants, and others for duty in the midshipmen's mess ashore and afloat on the practice cruises of the midshipmen_____ \$40, 000

Provided, That the employees of the midshipmen's mess shall be enlisted for one year for special service at the academy and afloat in practice ships with the midshipmen: *Provided further*, That the said employees of the midshipmen's mess who may be enlisted as above provided shall not be entitled to any gratuity or increase of pay for reenlistments, to any rations or commutation therefor, or to retirement for age, length of service, or for any other cause: *Provided further*, That the enlistments herein authorized may be made at any time subsequent to the passage of this act, the men so enlisted to be paid for the remainder of this fiscal year from any unexpended balances of the appropriation "Pay of professors and others, Naval Academy," for the fiscal year ending June thirtieth, nineteen hundred and seven.

As this completes all the items under the heading of "Pay of professors and others, Naval Academy," I wish to offer at this point a rearrangement of the items, in which the employees are grouped in the proper sequence. This rearrangement is made so that the committee can see at a glance the total employees of each office or department. This arrangement of the items has been repeatedly suggested by members of the committee and is submitted for that reason. In the cases of the few annual employees not so shown I have changed the amount of pay per annum to an even amount in dollars, omitting the cents, as suggested by a member of the committee.

Pay of professors and others, Naval Academy.

Professors, instructors, and library staff:

1 professor as head of department_____	\$3, 000
5 professors, at \$2,500 each_____	12, 500
3 professors, at \$2,200 each (decrease of 1)_____	6, 600
5 instructors, at \$2,000 each (increase of 2)_____	10, 000
4 instructors, at \$1,800 each_____	7, 200
10 instructors, at \$1,500 each_____	15, 000
1 swordmaster at \$1,500, 1 assistant at \$1,200, and two assistants at \$1,000 each_____	4, 700
2 instructors in physical training, at \$1,500 each_____	3, 000
1 instructor in gymnastics at \$1,200 and 1 assistant at \$1,000_____	2, 200

1 assistant librarian-----	\$1, 800
1 cataloguer-----	1, 200
1 shelf assistant at \$1,000 and 1 at \$900-----	1, 900
Superintendent's office:	
1 secretary-----	1, 800
2 clerks, at \$1,200 each, 1 at \$1,000, and 1 at \$900-----	4, 300
Office of commandant of midshipmen:	
1 clerk at \$1,200, 1 at \$1,000, and 1 writer at \$720-----	2, 920
Paymasters' office:	
1 clerk at \$1,200 and 1 at \$1,000-----	2, 200
Academic departments:	
4 clerks, at \$1,000 each-----	4, 000
Miscellaneous:	
1 dentist-----	1, 600
1 printer at \$720 and 1 at \$480-----	1, 200
Services of organist at chapel-----	300
Department of seamanship:	
1 coxswain-----	468
3 seamen, at \$396 each-----	1, 188
Department of ordnance:	
1 mechanic at \$960 and 1 at \$720-----	1, 680
1 armorer-----	648
1 chief gunner's mate-----	528
3 quarter gunners, at \$468 each-----	1, 404
Department of physics:	
1 electrical machinist-----	1, 000
2 mechanics, at \$720 each-----	1, 440
Messengers and attendants:	
1 messenger to the Superintendent-----	600
20 attendants at recitation rooms, library, store, chapel, armory, gymnasium, and offices, at \$300 each-----	6, 000.
Pay of stewards, cooks, bakers, mess attendants, and others, for duty in the midshipmen's mess ashore, and afloat on the practice cruises of the midshipmen-----	40, 000

Provided, That the employees of the midshipmen's mess shall be enlisted for one year, for special service at the academy and afloat in practice ships with the midshipmen: *Provided further*, That the said employees of the midshipmen's mess, who may be enlisted as above provided, shall not be entitled to any gratuity or increase of pay for reenlistments, to any rations or commutation therefor, or to retirement for age, length of service, or for any other cause: *Provided further*, That the enlistments herein authorized in this section may be made at any time subsequent to the passage of this act, the men so enlisted to be paid for the remainder of this fiscal year from any unexpended balances of the appropriation "Pay of professors and others," Naval Academy, for the fiscal year ending June 30, 1907.

Provided, That the Naval Academy band shall consist of one leader, who shall have the rank, pay, and allowances of a second lieutenant in the Marine Corps; one second leader, with pay at the rate of fifty dollars per month; thirty-three musicians, first class, and eleven musicians, second class: *Provided further*, That all members of the Naval Academy band shall be regularly enlisted for four years in the Navy for special service at the Naval Academy: *And provided further*, That the laws relating to pay and retirements of enlisted men of the Navy be, and the same are hereby, made to apply to members of the Naval Academy band: *And provided further*, That all members of the band shall be credited with all prior service of whatever nature in said band, as shown by the records of the Naval Academy and pay rolls of the ships attached to the academy.

The ACTING CHAIRMAN. On page 162 you ask for an increase of one man?

Admiral SANDS. We ask for a lot of men.

The ACTING CHAIRMAN. The second captain of the watch is the first one?

Admiral SANDS. That is simply an increase of force. I want to get that man as an assistant to the captain of the watch.

The ACTING CHAIRMAN. That will not be needed unless the force is increased.

Admiral SANDS. I think you will give me the force when I call attention to the fact as to why it is needed.

The ACTING CHAIRMAN. The next item is an increase of 15 watchmen?

Admiral SANDS. Yes, sir. In the middle of September every available marine at the academy was taken from the ships and from the barracks and sent down to Cuba. At the same time one of my seven watchmen got sick and another one resigned. That left five watchmen to guard the entire place. I was compelled to keep the draw open and I had to close up two gates, and there was no way that I know of to have prevented anybody evilly disposed coming in and taking anything they wanted. Men did come over the walls and rob the apartments of officers on the ground floor. There was no possibility of protecting them. We do not know of any Government property being lost. I think at all times we should have a sufficient force, so that no sudden demand in our foreign possessions could call away the people who are supposed to do the work of guarding the public property. We have only the services of a few marines now—I think 19.

The watchmen are divided into three shifts of eight hours each, two on a shift. The extra man fills in on account of absences on leave or sickness, and is at other times stationed at the main entrance to the academy. The two watchmen on duty at one time act as a patrol of the entire grounds, about 115 acres, bounded by 4,600 feet of wall on the city side and 6,800 feet of water front. They perform the duties of policemen for this entire area. On the occasions of large drills, hops, ball games, and other large gatherings the watchmen are detailed for extra work, so that they average about ten hours per day. The area to be covered is so great that the watch force can not accomplish the work which they are expected to do.

There should be sufficient watchmen for the following detail: One captain of the watch, 1 second captain of the watch, 6 watchmen for patrol of grounds, three shifts of 2 each; 9 watchmen for gates 2, 3, 4, three shifts of 3 each; 6 watchmen for Bancroft Hall and vicinity, three shifts of 2 each; 1 watchman to fill in during annual leaves of others; a total watch force of 24 men.

As a matter of comparison it should be noted that watch force of 61 men is employed on the State, War, and Navy building, 24 on the Treasury building, and 20 on the Congressional Library.

The ACTING CHAIRMAN. You need a sufficient force to watch these different buildings and to guard them, and they should be entirely outside the control of the Navy Department?

Admiral SANDS. Yes, sir.

The ACTING CHAIRMAN. And under your control?

Admiral SANDS. Yes, sir; we want men who can tell whether the regulations are being broken and whether proper persons are coming into the grounds. There is not anything in the world to keep improper people out at the present time.

Mr. BUTLER. How many marines did you have before?

Admiral SANDS. About 250.

The following item was missed at the hearing:

Labor at power house: For masons, carpenters, and other mechanics, laborers and attendants, and for care of buildings and grounds, wharves and boats.

An estimate of \$115,384.90 was submitted to the Department, but was reduced \$35,000 by the Secretary before being transmitted to Congress.

The estimate as submitted to the Department was the minimum amount actually needed, and the appropriation of a less amount will result in serious interference with the operation of the academy and a deterioration in public property for want of proper care. The actual operating cost under this head at the present time is \$9,000 per month, with all gangs reduced to the lowest limit and much necessary work actually abandoned. An itemized estimate has been prepared on a basis of the least number of employees necessary to operate the power plant, care for Bancroft Hall, and do the repair work of the academy. Omitting minor quantities, this estimate can be summarized as follows:

Power plant, furnishing steam heat, electric light and power, and including steam fitters and plumbers-----	\$45, 000
Masons, carpenters, plasterers, and painters-----	40, 000
Bancroft Hall (cleaning force) -----	25, 000
Miscellaneous -----	5, 000
Total-----	115, 000

Of the above items No. 1 represents the present actual running cost. In order not to exceed the appropriations for the current year the other items have been reduced, to the serious detriment of the work.

It will be practically impossible to avoid a deficiency under this head unless the amount asked is allowed.

The ACTING CHAIRMAN. The next change is on page 164, where appears the item "To reimburse appropriation, pay of watchmen, mechanics, and others," \$4,000?

Admiral SANDS. That is for overtime, and was caused by running the summer school. We had to employ people who would otherwise have been discharged.

Professor DODGE. That amount was spent out of this year's appropriation, and it is simply to reimburse the appropriation for this year.

Mr. KITCHIN. It should then go in as a deficiency?

Professor DODGE. No; I think it has been done frequently.

Admiral SANDS. This is so we will not be in the same fix next summer. From July to September we had 300 midshipmen. We employed the men in the summer to do the work of keeping the school open which was heretofore closed. Now, we have as many midshipmen to look out for in the summer as we used to have in the full battalion.

Mr. LILLEY. You have a summer school?

Admiral SANDS. Yes, sir. We had 300 last summer.

Mr. LILLEY. Did you ever have that school before?

Professor DODGE. Not to such an extent.

Admiral SANDS. They have thrown another class on me this year of 200 because of the impossibility of providing practice ships for the entire number of midshipmen.

The ACTING CHAIRMAN. The next change is on 163, "Repairs, Naval Academy," and you ask for an increased appropriation of \$10,000?

Admiral SANDS. Yes, sir; that is simply because we did not have enough money to carry on the work.

During the rebuilding period it has been the practice to make no repairs to the old buildings beyond that actually necessary to keep them in condition for use. Little or nothing has been necessary in the case of the new buildings, but the occupancy of these buildings causes a certain amount of wear which must be made good. Nothing less than the amount asked will be sufficient for the purposes enumerated in the bill, and a failure to keep the buildings in thorough repair from insufficient funds available will result in deterioration that ultimately will cost more to make good. Congress allowed \$20,000 for "Repairs," when the total value of the buildings was not more than \$1,000,000—2 per cent of their value. The amount now asked is three-tenths of 1 per cent of their value, which appears to be sufficient reduction to compensate for the difference between old and new buildings, particularly when the fact is considered that the wear and tear is produced by a largely increased number of people. The appropriations made in the past are of little value for comparison, as the whole establishment is now on a much larger scale as to buildings, roads, walks, sewers, drains, water system, electric lighting, and steam heating plants; equipment of midshipmen's quarters, including the kitchen, laundry, and refrigerating plants; equipment of buildings used for instruction, such as the armory, and the buildings for the departments of seamanship, marine engineering, and physics and chemistry. The personnel has increased, the number of midshipmen under instruction between three and four times and the number of officers, instructors, and other employees in a less degree. This large increase in the quantity of property to be kept in repair necessarily requires an increased appropriation.

The ACTING CHAIRMAN. You think this increase of \$10,000 is absolutely necessary?

Admiral SANDS. Yes, sir. We can not do the work. We submitted that estimate before and you cut it out. The appropriation under this head has been \$31,000 since 1903, but it was reduced to \$20,000 by you at the last session of Congress. It should be restored to \$30,000. The regular appropriation for "Repairs at the Military Academy" is \$40,000.

The next item, "Heating and lighting, Naval Academy," was missed at the hearing, and the following explanation is offered for insertion:

An increase of \$10,000 is asked, and it is further requested that the entire amount be made immediately available. The additional amount is necessary for the purchase of coal, and inasmuch as the coal purchased for this year will probably be insufficient the appropriation should be made immediately available.

It has been possible to meet the shortage in coal for the past two years from the accumulated surplus of previous years, but the supply of coal was exhausted in May, 1906, and it was necessary to burn wood, which had accumulated during the rebuilding. The coal purchased for the present fiscal year may not be sufficient to last

until July 1, 1907, and it is therefore advisable to make the appropriation immediately available.

The expenditures for the fiscal year 1906 were as follows:

Fuel -----	\$34,531.96
Oil, grease, and waste -----	1,045.96
Electric lamps, engine metal, carbons, brushes, packing, globes, wire, battery parts, lamp parts, stoker parts, line material, belting, emery, expansion joints, and other materials -----	4,137.67
Apparatus and tools -----	266.37
Total -----	39,981.96

As a matter of comparison it should be noted that the appropriations for fuel, oil, and waste for various Government institutions is as follows:

United States Capitol -----	\$40,000
Library of Congress -----	32,500
State, War, and Navy Building -----	43,000
United States Military Academy -----	54,000

The heating service of the Naval Academy covers a radius of 2,000 feet, and the lighting service of 3,500 feet.

The ACTING CHAIRMAN. The next item is, "Purchase of azimuth tables, \$700."

Admiral SANDS. That is for the instruction of the midshipmen. The Navy Department has no money to allot for these tables, and so we have to provide them ourselves.

Mr. DAWSON. What is an azimuth table?

Admiral SANDS. It is for the instruction of the midshipmen in navigation.

The ACTING CHAIRMAN. Why do you put that in this way—why not just increase the amount?

Admiral SANDS. We have not got them now; we want the authority. They will be transferred from one class of midshipmen to another as long as they last.

The ACTING CHAIRMAN. The next change is on page 165:

Stores, stationery, periodicals, materials, apparatus, machinery, tools, and fittings, for use in the department of marine engineering and naval construction for purposes of instruction, repairs of apparatus, tools, and machinery, care and cleaning of building and equipment, and for all necessary purposes, fifteen thousand dollars.

Professor DODGE. That should be considered along with the other two items.

The three items in the appropriations for the current year, "Stores, material, and apparatus," have been brought under two items and the wording changed to conform to the necessary uses, with a reduction of \$2,500 in the amount involved. The appropriations heretofore made for the department of marine engineering were as follows:

Apparatus -----	\$30,000
Material -----	1,500
Stores -----	1,000
Total -----	32,500

In lieu of the above appropriations it is now requested that one appropriation only be made for the department of steam engineering, amounting to \$15,000, and that an appropriation of \$15,000 be made

for the purpose of buying the necessary stores, material, and apparatus for instruction purposes for the other departments, making a total appropriation of \$30,000 instead of \$32,500. The appropriations for the department of marine engineering will be utilized in the purchase of apparatus for the instruction of midshipmen, tools and machinery, and in the purchase of material, stores, etc., required for use in practical drills of the midshipmen in the various shops of this department; also for stores, material, etc., required to keep the equipment of the department up to date and in working order; also for the purchase of material for use in repairs of the steam apparatus of the steam cutters and ships attached to the Naval Academy.

The amount heretofore appropriated, \$2,500, for the purchase of material and stores, has been entirely inadequate and it has been necessary to obtain donations from the Bureau of Steam Engineering in order to carry on the work. There is constantly required, both for repair work done by this department and for the use in the instruction of midshipmen, a considerable quantity of such material as pig iron, brass, copper, pipe, tools for the use of the midshipmen in their practical drills, white pine for the use of the pattern shop, files for use on the bench work of the machine shop, molding sand, coke for the cupola, fuel oil for the brass foundry, lubricating oil for the machinery, and various other materials.

There are no specific appropriations now made for the purchase of materials used in other departments for instruction purposes except the department of physics and chemistry. There should be an appropriation that will enable the purchase of the proper equipment for electrical engineering instruction, as well as for the purchase of supplies in small quantities for the various other departments. The change asked for under this appropriation will enable this to be done without an increase in expense.

MR. BUTLER. And the three items amounted to \$32,500?

PROFESSOR DODGE. Yes, sir.

THE ACTING CHAIRMAN. Then there is an item for three laborers?

PROFESSOR DODGE. That is a new item for the rifle range on the other side of the river. This estimate is based on the employment of three laborers to keep the rifle ranges on the north side of the Severn River (about 40 acres) in condition for use at all times. These ranges have been recently completed at a cost of \$39,499.95.

THE ACTING CHAIRMAN. That makes a saving there of practically only about \$600?

PROFESSOR DODGE. That has no connection with it.

THE ACTING CHAIRMAN. Have you all these things now?

PROFESSOR DODGE. Those are the regular things bought out of the three appropriations. We had before three appropriations, and I have simply written out this item so that we can go on buying exactly what we have bought heretofore, and have reduced it practically from \$30,000 to \$15,000. We have been equipping the department of steam engineering from the appropriation of \$30,000 for "Apparatus," and the work is nearly completed. The reduced amount now asked will be sufficient to pay operating expenses and keep the equipment up to date.

THE ACTING CHAIRMAN. This \$15,000 is for the purchase of apparatus for the other academic departments of the academy?

Professor DODGE. The item under consideration is for the department of steam engineering. The one following is for the other academic departments.

The ACTING CHAIRMAN. Why not strike out this language, strike it out and put all in one?

Professor DODGE. I have enumerated some things that were not enumerated in the others, but which we have been purchasing. In changing an appropriation it is always necessary to exercise care in wording it, in order that it may be used as intended by Congress. If items purchased do not come specifically within the wording of an appropriation the auditor may disallow the vouchers drawn in payment for these articles.

If, however, you prefer to adhere to the old wording, I suggest the following as a substitute, which simply combines the three old appropriations, with a decrease in the amount. Strike out the old appropriations, "Stores in the department of steam engineering," "Materials for repairs in steam machinery," and insert, below "For contingencies for the Superintendent of the academy," the following:

* * * stores, materials for repairs in steam machinery, and apparatus for the instruction of midshipmen in the department of marine engineering and naval construction-----	\$15,000
* * * apparatus for the instruction of midshipmen in the various academic departments -----	15,000

The ACTING CHAIRMAN. Under "Public works" there is an appropriation asked of \$380,000?

Professor DODGE. That is the balance of the authorized amount.

The ACTING CHAIRMAN. Will you need it?

Professor DODGE. Yes, sir. This carries us to June 30, 1908.

The ACTING CHAIRMAN. You will need it?

Professor DODGE. Yes, sir.

Thereupon the committee adjourned.

No. 7.

**BUREAU OF YARDS AND DOCKS—STATEMENT OF REAR-ADMIRAL
MORDECAI T. ENDICOTT, CHIEF OF BUREAU.**

CIVIL ESTABLISHMENT.

THURSDAY, *December 13, 1906.*

The CHAIRMAN. The first is general maintenance of yards and docks, and the language is the same as last year.

Admiral ENDICOTT. I believe so.

The CHAIRMAN. Last year the appropriation was \$850,000, and this year you are asking for \$1,000,000.

Admiral ENDICOTT. Yes, sir.

The CHAIRMAN. There is no deficiency this year, I take it.

Admiral ENDICOTT. There will be; I was going to ask Congress for about \$50,000. It is very hard to get along without it. I did not bring the items here, because I did not know that you would go into that.

The CHAIRMAN. Please put that in. One of the largest items is that growing out of the consolidation of power plants. The running of these last year, for fuel, attendance, etc., cost \$355,338.27, and the cost this year will be considerably more. Water cost last year \$94,109.91. Pay of men on leave cost \$58,184.87.

The CHAIRMAN. The consolidation of the power plants is a measure of economy.

Admiral ENDICOTT. Yes; it costs less money, but we have to provide all the coal used in generating power for all the Bureaus, which we did not have to do before and which in itself is a very large item. The expenses of other Bureaus for fuel are reduced accordingly.

The CHAIRMAN. That is an increase of \$150,000.

Admiral ENDICOTT. Yes, and I think it is very necessary.

The CHAIRMAN. Can you not get along with less?

Admiral ENDICOTT. I don't think we could. You know that last year we had to almost close up the yards for several months in order to keep within the appropriation.

The CHAIRMAN. How about this contingent expense of \$30,000?

Admiral ENDICOTT. That is the same as last year, and I do not think it ought to be reduced. I do not always use it up, however.

The CHAIRMAN. Will you furnish a statement showing how that has been expended?

Admiral ENDICOTT. Yes. Sometimes it is not sufficient, which is the case this year, owing to the large expenses necessary at the Pensacola Navy-Yard, resulting from a destructive hurricane.

The CHAIRMAN. Now we will turn to the civil establishment. At Portsmouth, N. H., you ask for one bookkeeper at \$1,200. Is he employed at present?

Admiral ENDICOTT. There is a man who has to do that service, and he is paid out of an appropriation for other work. He ought to be on the civil establishment.

The CHAIRMAN. He would like to get there?

Admiral ENDICOTT. They prefer that; it is a more proper place and a more proper charge.

The CHAIRMAN. Navy-yard, Boston, one electrician, for whom you recommend an increase of \$200.

Admiral ENDICOTT. There is also one at Portsmouth. You will find it running through all of the yards, and it is for the reason that the electricians are not getting adequate pay. Fourteen hundred dollars a year is less than \$5 a day, and this is not a machanic or a machinist, but a trained, educated electrical engineer in charge of these central power plants. He is not getting anything more than the pay of a first-class mechanic. We have lost some, and some others are very much dissatisfied with the pay, so that we are continually appealed to for an increase. I laid the matter before the Secretary this year, and he agreed to approve a maximum of \$1,600, which is about \$5 a day. The present pay is entirely inadequate for the class of service, and I think this ought to be allowed.

The CHAIRMAN. Do you recommend it all through the yards?

Admiral ENDICOTT. Yes, sir.

The CHAIRMAN. I should think some yards would be more important than others.

Admiral ENDICOTT. Well, I have not recommended it in every yard, because in some places we do not employ a professional electrician, do not need one. But at all of the principal yards these plants are large and important, with fine machinery, and are very valuable. As you are aware, we are doing away entirely with separate power plants at some of the yards, and concentrating all under one plant in yards and docks.

The CHAIRMAN. Is this consolidation fully established at any one yard?

Admiral ENDICOTT. At Portsmouth, N. H., we are doing it. At New York we have taken over a large portion of the load from other departments, but not all of it. At League Island we are handling it all.

Mr. KITCHIN. What are the duties of the ship keeper at Sacket Harbor, N. Y.?

Admiral ENDICOTT. He has charge of the naval station. You know we have a little naval station up there, and he is a care taker. He was called ship keeper, because at the time his employment was authorized there was a ship on the stocks there, but that has been demolished, and there is no ship there now. But there is a property of several acres, some buildings, and materials that belong to the Bureau of Ordnance, a few guns and gun carriages. That is the entire cost of taking care of the place, excepting that I give them a few hundred dollars during the year for the repairs of the buildings and fences.

The CHAIRMAN. How about this messenger for the civil engineer's office at League Island at \$2 per day. Have you a messenger there now?

Admiral ENDICOTT. Not a messenger. The services are performed by a laborer.

The CHAIRMAN. At the Washington Navy-Yard you want one stenographer and clerk at \$3.04 per diem.

Admiral ENDICOTT. In the organization there they have no stenographer except as they employ one from time to time out of some other appropriation. They have a very small force.

Mr. KITCHIN. Wouldn't it be better to put that man on the annual salary list instead of on a per diem? I notice that they have men on the per diem list, and every year they put a few of them on the regular list. If you know that you are going to need him all the year, it seems to me it would be better to put him on the salary list and be done with it.

Admiral ENDICOTT. It suits us just as well; in fact, a little better. But generally Congress has manifested a preference to have per diem employees. His leave is about the same whether he is a per diem or an annual employee.

The CHAIRMAN. At the Norfolk yard you ask for one requisition and time clerk, civil engineer's office, \$1,017.25. Have they a man doing that work there now?

Admiral ENDICOTT. Yes, sir; there is a man doing the work, but there is no man of that rating on that force.

The CHAIRMAN. At New Orleans Naval Station, one electrician at \$1,600. Have you an electrician there now?

Admiral ENDICOTT. We now have a mechanic.

The CHAIRMAN. Is he doing the work?

Admiral ENDICOTT. At present; but they are building up a power plant there, and this was with a view of having a professional electrical engineer there.

The CHAIRMAN. One writer and requisition clerk, \$950. You have one now, have you not?

Admiral ENDICOTT. Yes, we have out of another appropriation.

The CHAIRMAN. We will now go to the Mare Island Navy-Yard.

Admiral ENDICOTT. There is a change in the electrician there. He is now a laborer taken out of the gang.

The CHAIRMAN. At Cavite there is one clerk increased \$200.

Admiral ENDICOTT. He is an American. The clerk in the office of the yards and docks is the chief clerk, and we pay them all the same amount, \$1,400, or endeavor to. He has been receiving \$1,200. That is the cause of the increase there.

The CHAIRMAN. Now, as to the navy-yard at Charleston, S. C., commandant's office?

Admiral ENDICOTT. We have no civil establishment there; we have never appropriated for it yet. We have to get the work done and pay for it out of appropriations for public improvements. The stenographer, writer, mail messenger, and janitor are employees that will be necessary there right along every year, so I think they ought to be on the civil establishment.

The CHAIRMAN. Why do you call them "commandant's office?"

Admiral ENDICOTT. That is put in there, but you can leave out those two words if you wish, although they show to you what we want them for. I furnish clerical assistance for the commandant's office, the civil engineer's office, and the office of the captain of the yard.

The CHAIRMAN. Now as to the civil engineer's office?

Admiral ENDICOTT. That is at Charleston. Those are necessary employees.

The CHAIRMAN. Is that why you make a distinction?

Admiral ENDICOTT. Yes, sir. Under this you know where the money is going, but sometimes the commandant raids the other offices and takes them out.

The CHAIRMAN. Those will be necessary right along?

Admiral ENDICOTT. Yes, sir.

The CHAIRMAN. The next is naval station at Guantanamo, Cuba. We haven't much down there yet?

Admiral ENDICOTT. No, we haven't much, and we have no civil establishment; but those employees are necessary, and for that reason I add them to this list.

The CHAIRMAN. What have you done down there, anything at all?

Admiral ENDICOTT. They have commenced the dry dock, have used up the money, and stopped. We are doing something in the way of water supply, building a quay wall, and doing some dredging on funds already appropriated, but that work will have to stop, because of exhaustion of funds, probably in a month or two.

The CHAIRMAN. Are any buildings up?

Admiral ENDICOTT. No; only a few temporary buildings. You have not yet appropriated for any large buildings, and we are closing work up there until you appropriate more money.

The CHAIRMAN. The next is the naval station, Olongapo, P. I.

Admiral ENDICOTT. There is no civil establishment there, but we are doing a great deal of work, and that force is necessary if the station is maintained. You have appropriated for public works from time to time, and made a small appropriation last year. You will notice that that is not a large amount. Excepting for the chief clerk, draftsman, and one foreman, the others are native employees, to whom we pay small salaries.

The CHAIRMAN. You are employing men there now?

Admiral ENDICOTT. Yes; we are doing a good deal of work there. We are putting up a coaling plant, to cost half a million dollars.

The CHAIRMAN. At Tutuila you ask for one clerk, at \$1,000.

Admiral ENDICOTT. We have to pay him out of my maintenance fund. We will always have a clerk there, and for that reason I suggest putting him on the civil establishment.

SATURDAY, *December 15, 1906.*

The committee this day met, Hon. George E. Foss in the chair.

PUBLIC WORKS.

STATEMENT OF REAR-ADMIRAL M. E. ENDICOTT, CHIEF BUREAU OF YARDS AND DOCKS—Continued.

The CHAIRMAN. The first item is navy-yard, Portsmouth, N. H., and the estimates submitted amount to \$1,137,900. You are asking for an appropriation for railroad and rolling stock every year. Can not that item be left out?

Admiral ENDICOTT. It can be reduced to \$2,000.

The CHAIRMAN. The next item is sewer system extension, \$5,000?

Admiral ENDICOTT. That can be reduced to \$2,000.

The CHAIRMAN. The next item is quay wall, to extend, \$50,000?

Admiral ENDICOTT. We ought to have that appropriation; it is important work. I think you can make it \$25,000. It is very important that the quay wall there should be extended.

The CHAIRMAN. Are you using all of it all the time?

Admiral ENDICOTT. All that borders deep water. Some portions the ships can not get to because it was built many years ago in shallow water.

The CHAIRMAN. It is a matter that you can build fast or slow?

Admiral ENDICOTT. Yes, sir. Suppose you make it \$20,000.

The CHAIRMAN. The next item is grading, to continue, \$30,000?

Admiral ENDICOTT. That item can be made \$15,000.

The CHAIRMAN. Will we have to provide appropriations for grading there every year?

Admiral ENDICOTT. You will for a few years. The surface is above the grade, and it is rock material. It is rather expensive to do the work. We are now grading in the vicinity of the new dry dock and the buildings for steam engineering.

The CHAIRMAN. It seems to me that you ought to do a great deal of grading for \$10,000.

Admiral ENDICOTT. It is rock, and requires blasting. It is a good deal above the grade, and is expensive.

The CHAIRMAN. You think that \$15,000 should be appropriated?

Admiral ENDICOTT. Yes, sir.

The CHAIRMAN. The next item is central power-plant extension, \$60,000?

Admiral ENDICOTT. We need all of that amount.

The CHAIRMAN. Will that complete it?

Admiral ENDICOTT. For the present; yes, sir. For a few years that will furnish all the power necessary.

Mr. KITCHIN. That item had better be made to read "to complete?"

Admiral ENDICOTT. You can call it "to complete."

The CHAIRMAN. The next item is pattern shop for steam engineering, to complete, \$61,200. Did we not make an appropriation for that last year?

Admiral ENDICOTT. You allowed about \$39,000, and you said "towards" it.

The CHAIRMAN. Was that last year?

Admiral ENDICOTT. The year before. But you did not limit the cost in any way. You said "towards," but you did not say what the ultimate cost should be.

The CHAIRMAN. Have you done anything?

Admiral ENDICOTT. Nothing but make the plans. It is a building that is going to cost about \$100,000.

Mr. KITCHIN. How much was appropriated two years ago?

Admiral ENDICOTT. I think \$39,000.

Mr. KITCHIN. Nothing done yet but the plans?

Admiral ENDICOTT. That is all. We found that we could not put up anything on the scale desired for \$39,000 that would be useful, and therefore it was thought best to wait.

Mr. KITCHIN. Is the \$39,000 still at your disposal?

Admiral ENDICOTT. Yes, sir. That does not lapse into the Treasury at the end of the fiscal year. If the money is appropriated for a public improvement it holds.

The CHAIRMAN. If you do not get this appropriation this year you will not go ahead?

Admiral ENDICOTT. No, sir.

The CHAIRMAN. Are not the shops sufficient for steam engineering?

Admiral ENDICOTT. No, sir; they are not. It was \$40,000 that you appropriated for the pattern shop. Steam engineering is very badly off, and they have been coming to us with estimates for several years for that plant. You have authorized two or three of the buildings.

The CHAIRMAN. The next item is "Blasting in front of quay wall," \$50,000.

Admiral ENDICOTT. That is very important in order to get a proper depth for handling the heavy-draft vessels in front of the new dry dock.

The CHAIRMAN. What is the depth? I thought we had sufficient depth.

Admiral ENDICOTT. We have in the harbor, but not right in front of the dry dock. It is one of the deepest harbors on the coast.

The CHAIRMAN. I thought that was one of the great arguments always used—that you had plenty of water and did not have to dredge.

Admiral ENDICOTT. Depth once made is practically permanent, because there is not any silt; but this is the original rock.

The CHAIRMAN. Right in front of the dry dock?

Admiral ENDICOTT. Yes, sir; to one side.

The CHAIRMAN. Have you used the dry dock?

Admiral ENDICOTT. Yes, sir.

The CHAIRMAN. Can you get a big battle ship in?

Admiral ENDICOTT. Yes, sir. It lies right in front of the quay wall. You can not lay a vessel up there if she draws 26 or 27 feet, because there is danger of grounding and injuring her.

The CHAIRMAN. If she draws less you can?

Admiral ENDICOTT. Yes, sir.

The CHAIRMAN. There are other places along the quay wall where you can put the vessels?

Admiral ENDICOTT. Yes, sir.

The CHAIRMAN. There is plenty of space?

Admiral ENDICOTT. No, sir. This is right on the quay wall adjoining the dry dock, where you want to moor a vessel before taking it into the dry dock. I think it is more important than a great many of these other things.

The CHAIRMAN. More important than the new buildings?

Admiral ENDICOTT. It is more important than most of them. When you come to the foundry for steam engineering, that is very important.

The CHAIRMAN. The next item is "Track for forty-ton crane, extension, forty-six thousand eight hundred dollars."

Admiral ENDICOTT. The track extends now only around the dry dock, and we want to extend it along the quay wall.

The CHAIRMAN. Is it necessary this year?

Admiral ENDICOTT. It is important, not absolutely necessary.

The CHAIRMAN. Then we can leave it out this year?

Admiral ENDICOTT. Yes, sir.

The CHAIRMAN. The next item is "Foundry (to cost two hundred and twenty-four thousand three hundred dollars), one hundred thousand dollars."

Admiral ENDICOTT. Steam engineering has no foundry there. The old foundry was condemned and demolished. It was an old wooden affair, a fire trap. They have absolutely no foundry to-day. I think that is the most important of the buildings which steam engineering asks for.

The CHAIRMAN. Has any other department a foundry?

Admiral ENDICOTT. Construction and repair has a foundry.

The CHAIRMAN. If we should have a consolidation of shops for all the departments there would be no need for more than one foundry in the yard?

Admiral ENDICOTT. Then there would be but one. Whenever you get to that it lops off.

The CHAIRMAN. The next item is, "Copper and blacksmith shop for steam engineering (to cost one hundred and twenty thousand dollars) sixty thousand dollars." Do you regard that as absolutely essential during this coming year?

Admiral ENDICOTT. I do not think it is absolutely essential at the present time. They have a small space in a shop for that purpose now, but it is inadequate and a poor one. It is not what it should be by any means.

The CHAIRMAN. The next item is, "Erecting shop for steam engineering, eighty-five thousand two hundred dollars."

Admiral ENDICOTT. That is for steam engineering. I think four are asked for especially by the chief of engineers and have been approved by Mr. Bonaparte. I think that is one of the least important shops for steam engineering.

The CHAIRMAN. You regard the foundry as the most important of any, if we keep up the present system?

Admiral ENDICOTT. Yes, sir; if you do not consolidate.

The CHAIRMAN. Do you think it would be advisable to consolidate the shops?

Admiral ENDICOTT. I think it ought to be brought about within certain limits. I think there are some things which could not be very well consolidated, but many could be consolidated so that the work of all the bureaus of that particular class could be consolidated in one building.

The CHAIRMAN. Take the matter of the foundry, do you regard that as a matter that each bureau should have its own foundry?

Admiral ENDICOTT. No; I think one foundry could do the work for all the bureaus.

The CHAIRMAN. What other line is there where they could have one common shop?

Admiral ENDICOTT. One blacksmith shop could manage the work of all the bureaus.

The CHAIRMAN. And one paint shop?

Admiral ENDICOTT. Yes, sir.

The CHAIRMAN. What else?

Admiral ENDICOTT. A copper shop.

Mr. KITCHIN. I believe they have practically consolidated the power plants?

Admiral ENDICOTT. Yes, sir. They are being consolidated now. Some have been consolidated. I think one pattern shop would be sufficient for all the different departments.

The CHAIRMAN. The next item is, "Chapel and recreation hall, fifty thousand dollars."

Admiral ENDICOTT. There is nothing of that kind in the yard and there are a great many men there. You know we are building a naval prison, and we have a prison ship, and we have a large force of marines. There is no recreation hall and no chapel. One has been recommended for two or three years in succession, and approved by the Secretary, but you have not authorized it.

Mr. KITCHIN. Is it the purpose of this appropriation to have only one hall or building?

Admiral ENDICOTT. One building, but it will be divided for recreation and for religious services. It is not proposed that one room shall answer for both purposes.

Mr. KITCHIN. Will the recreation hall be fixed up with gymnastic appliances?

Admiral ENDICOTT. Yes, sir; and a reading room, in order to give the sailors and others something to interest them in the yard, rather than to go across town and lie around the grogshops.

The CHAIRMAN. Instead of taking up each item I wish you would just indicate to us those which you think are the most important, and then we will take them up.

Admiral ENDICOTT. Yes, sir. I think the naval prison administration building, to complete, \$10,000, is one of the most important.

The CHAIRMAN. What else?

Admiral ENDICOTT. Then the additional cells, elevator, and fittings for the naval prison, \$75,000.

Mr. KITCHIN. How many cells are expected to be provided under this item?

Admiral ENDICOTT. With these additional cells which can be put up with \$75,000, I think it makes 320.

Mr. KITCHIN. Do you know how many we have there now?

Admiral ENDICOTT. I think we have about 160.

Mr. KITCHIN. These cells cost about \$1,000 apiece?

Admiral ENDICOTT. That includes the heating and lighting and the plumbing. Every one has a water-closet and locking device and ventilation, and all that sort of thing. Then there are some elevators in connection with it also.

The CHAIRMAN. What other items do you think are important?

Admiral ENDICOTT. I think the \$15,000 for the coaling plant is an important item. That plant was very badly injured by fire, and it is necessary to make some repairs to it. I think provision ought to be made for the purchase of a water supply. The supply in the yard is inadequate. We have been experimenting in the way of sinking wells to see if we could get a supply and have failed. We depend on cisterns and wells, and we have had to connect with a system outside and buy water. It is costing us, I think, in the neighborhood of twelve to thirteen thousand dollars per year to purchase water, and the whole plant can be bought for \$170,000.

The CHAIRMAN. That is from an estate?

Admiral ENDICOTT. Yes, sir; it belongs to the Frank Jones estate. I understand now the price they will take is \$170,000.

The CHAIRMAN. They may take less if we wait a little longer.

Admiral ENDICOTT. I do not know. I understand there are other people looking at it, but they prefer to sell to the Government.

The CHAIRMAN. Are those all the important items for this year?

Admiral ENDICOTT. Those are the most important. There are several estimates for buildings in connection with the naval prison, the administration of which comes under the Judge Advocate, and for which he is extremely anxious, and which Mr. Bonaparte has approved. It includes a barracks for marines to cost \$105,000, quarters for officers and naval prison furniture and fittings, \$8,500, a cooking plant and baking plant. Those things should be provided to make that plant complete. Mr. Bonaparte thought them of great importance.

Mr. KITCHIN. What is the necessity for the naval prison barracks?

Admiral ENDICOTT. It is for barracks for marines who will be stationed there as guards.

Mr. KITCHIN. What accommodations have they for those marines now?

Admiral ENDICOTT. We have accommodations inside the present building for a small squad, just sufficient for a guard.

The CHAIRMAN. They want a big barracks right next to the prison?

Admiral ENDICOTT. Yes, sir.

The CHAIRMAN. The next item is the navy yard, Boston, Mass., and this year you are asking for \$525,000. Last year it was a good deal less. Now, please point out briefly what you regard as the most important and necessary items for the coming year?

Admiral ENDICOTT. I think the first item on the list, paving, is an important item. If you can not spare \$20,000 give us \$10,000. I have explained several times that that yard was in a wretched condition, practically nothing but a few cobblestone pavements a few years ago. There should be a water-closet between the two dry docks. We have completed a new dry dock, and when the two docks are occupied there may be a thousand men on those ships.

The CHAIRMAN. Does it cost \$15,000?

Admiral ENDICOTT. To provide for a thousand men requires large accommodations.

The CHAIRMAN. The next item is "Shears on pier numbered six, forty-three thousand dollars." Can that go over this present year?

Admiral ENDICOTT. Yes, sir.

The CHAIRMAN. What else?

Admiral ENDICOTT. You mean the items we consider the most important?

The CHAIRMAN. Yes, sir.

Admiral ENDICOTT. The "third floor, building No. 107, \$6,000," is for putting a third floor in the yard and docks shop, which I think important. I think the electrical plant extension of \$25,000 is important, and the heating plant extensions. The electrical plant is for wiring buildings, connecting up the new power house, etc., and the heating plant is to connect nine different buildings which are now heated by different plants. I think it is economy to connect these buildings with the central heating plant. We need some railroad rolling stock, \$3,000; telephone system extension, \$1,000; and the railroad system extension, \$2,000.

I think the repairs to dry dock No. 1, to cost \$15,000, ought to be allowed at this time. That has been asked for repeatedly. The dock has been in a leaking condition for a great many years. It is the old stone dock, now about 70 years old. It is getting a little worse all the time. If the masonry at the entrance is not taken up and relaid there

may be some accident sometime. The item to complete building No. 108, \$5,000—that is, the new power house—I think that that is necessary; also putting concrete floors in the dynamo room and boiler room and making a few other improvements, and the salt-water system for flushing dry dock No. 2, \$2,500, ought to be installed. I think the extension to the coal plant, to cost \$7,000, ought to be included. It is for the purpose of providing apparatus for hoisting, which will enable us to coal vessels much more rapidly.

Mr. ROBERTS. What is building No. 42?

Admiral ENDICOTT. That is the steam engineering building.

Mr. ROBERTS. What are those improvements?

Admiral ENDICOTT. You mean to cost \$9,000?

Mr. ROBERTS. Yes, sir.

Admiral ENDICOTT. It is for an elevator and for extending the lighting and heating system into the coppersmith-shop portion. That is very desirable. I passed it over for a moment in running down the list.

Mr. ROBERTS. What is building No. 63?

Admiral ENDICOTT. That is supplies and accounts timber shed. I think the ropewalk, \$10,000, is very important. That yard is pressed very much in the manufacture of rope.

Mr. KITCHIN. Why do they call it a ropewalk?

Admiral ENDICOTT. That was the original name when they had those long buildings in the shape of long halls.

Mr. ROBERTS. It is what they always call a building where they made rope.

The CHAIRMAN. What other items do you consider as important?

Admiral ENDICOTT. I think the improvements to the naval prison are important, \$2,500. I also think the starting of the new dry dock is important.

The CHAIRMAN. How many docks have you there now?

Admiral ENDICOTT. Two. There is a fine site for another dock.

Mr. ROBERTS. One is a little dock?

Admiral ENDICOTT. Yes, sir; 70 years old, and one has recently been completed. This would be a shorter dock than the one recently built, which is 750 feet long, and it would increase the docking facilities on the Atlantic coast very much. The same plant which furnishes the power for operating the other docks would be used for this one.

The CHAIRMAN. How many docks are you asking for this year at all the yards?

Admiral ENDICOTT. I asked for four or five, but I think the Secretary cut my estimate down, one for Boston, two for Norfolk, and one floating dry dock.

Mr. KITCHIN. What has become of the Pensacola dock? Last year there was a great deal of testimony as to the importance of that dock.

Admiral ENDICOTT. That is not in the bill this year. The Secretary cut it out. I asked for it, but he cut it out. We lost one dry dock down there in the hurricane. That was a small wooden one which only cost about \$100,000. It was so badly demolished that we did not think it was worth while to repair it.

The CHAIRMAN. I wish you would put in a statement of the number of dry docks in use and how much they have been used this year.

Mr. KITCHIN. I hope you will also inform us in that statement as to how many docks you now have and where they are located, how

many are completed, and how many have been authorized but not completed.

Admiral ENDICOTT. I will send you a little table. There are fifteen now in use and seven in different stages of completion.

United States dry docks.

Location.	Type.	Completed.	Remarks.
Portsmouth, N. H.....	Floating..	1851	Unserviceable.
Do.....	Graving..	1906	
Boston, Mass.....	do.....	1833	
Do.....	do.....	1906	Under construction.
New York, N. Y.....	do.....	1851	
Do.....	do.....	1890	
Do.....	do.....	1897	
Do.....	do.....	.....
League Island, Pa.....	do.....	1891	Do.
Do.....	do.....	.....
Norfolk, Va.....	do.....	1834	
Do.....	do.....	1889	Do.
Do.....	do.....	.....
Charleston, S. C.....	do.....	Do.
Pensacola, Fla.....	Floating..	^a 1898	Unserviceable.
Do.....	do.....	^a 1898	
New Orleans, La.....	do.....	1902	Under construction.
Mare Island, Cal.....	Graving..	1891	
Do.....	do.....	.....
Puget Sound, Wash.....	do.....	1892	
Do.....	do.....	Do.
Pollock, P. I.....	do.....	^b 1898	
Olongapo, P. I.....	Floating..	1905	Do.
Guantanamo, Cuba.....	Graving..	.....

^a Date of purchase.

^b Acquired.

We have asked for a thousand dollars for transferring the pillar crane to the timber basin. The crane which we have in another part of the yard is not very much needed there but is very much needed at the timber basin and it will cost a thousand dollars to transfer it.

I think the rebuilding and enlarging of boiler-shop portion of building No. 42 is very important. We have not room to do the boiler work that is required in that yard.

The CHAIRMAN. That is practically a new building?

Admiral ENDICOTT. It practically extends one wing of the building.

The CHAIRMAN. How many different bureaus have boiler shops?

Admiral ENDICOTT. This is the only one in the yard.

The CHAIRMAN. Is that something that could be consolidated?

Admiral ENDICOTT. It is the only one in the yard of any account. That is, steam engineering.

The CHAIRMAN. They can get along another year without a new shop?

Admiral ENDICOTT. I suppose they could. Steam Engineer Rae dwells on its importance very much.

Mr. ROBERTS. Do you know whether or not they have authorized the building of boilers for one of the ships—the *New York*—in that yard?

Admiral ENDICOTT. I do not know. They complain that they can not handle the work of that class at that yard. They may be building boilers for vessels on the foreign stations. If a vessel is coming from a foreign station for new boilers, they issue an order to some navy-yard to get the boilers ready. Boston is not now fitted to handle work of that kind to any extent.

Mr. ROBERTS. About the naval prison at Portsmouth; perhaps you have gone all over that. How is that getting along, and when are they going to get into it?

Admiral ENDICOTT. It is practically completed so far as the present contracts go; that is, it will be completed the early part of January. The contractor was in my office this morning and so stated.

Mr. ROBERTS. And it will be ready to take in prisoners?

Admiral ENDICOTT. Yes, sir; as soon as he gets out. The building was designed to be self-contained. There were to be quarters for a small guard and for the servants, with apartments in the basement for the cooking and the storing of provisions, etc., but they are asking for separate buildings outside; that is, the judge-advocate is asking for it.

Mr. ROBERTS. I am more particularly interested in the prison itself, because we want to get the prison out of the Boston yard as soon as possible, as they are occupying space that is badly needed by supplies.

Mr. LOUD. How many foundries are there in the Boston yard?

Admiral ENDICOTT. There are two: Steam engineering and construction and repair.

Mr. LOUD. Is that all?

Admiral ENDICOTT. Yes, sir; I do not think equipment has a foundry.

Mr. LOUD. What is the reason those should not be consolidated?

Admiral ENDICOTT. I think the foundries could be consolidated at any yard. I do not see why one department could not do the casting for all the departments.

Mr. LOUD. Is there any logical reason why they should be separate?

Admiral ENDICOTT. No, sir.

Mr. LOUD. Is it more expensive to run them as separate establishments?

Admiral ENDICOTT. Yes, sir; I think it is. I stated a moment ago that there used to be a foundry in the Bureau of Yards and Docks at some of the yards, but we have abandoned ours.

The CHAIRMAN. Which department has the more use for a foundry, construction and repair or steam engineering?

Admiral ENDICOTT. I think steam engineering.

The CHAIRMAN. The next item is, Navy-yard, New York, N. Y. Please point out the more important items.

Admiral ENDICOTT. I think the electric plant extensions, the heating system extensions, and the underground conduit extensions are all important. They are all associated in this matter of the distribution of power to other bureaus.

Mr. KITCHIN. Is this amount of money necessary for each one of them?

Admiral ENDICOTT. I think it is. There has been approved only about half of what they asked at the yard. The underground conduit could be reduced to \$15,000.

Mr. KITCHIN. It is \$15,000 in the bill.

Admiral ENDICOTT. The Secretary must have cut it down. I have no note in regard to it.

The CHAIRMAN. What other items are there?

Admiral ENDICOTT. I think the \$7,000 for the electric motors for pump well valves is important. It is to operate them by electricity.

I think the item for electric elevators, \$10,000, is important. The elevators are in the supplies and accounts storehouse, and it is for the purpose of changing them into electric elevators. They are now operated by steam. There is a little boiler plant that is run exclusively for operating the elevators, and we want to get that out of use, and if we can turn the steam elevators into electric elevators we can get rid of it. The \$140,000 for the central power plant is important.

The CHAIRMAN. Have you spent anything on the central power plant?

Admiral ENDICOTT. Yes, sir; we have spent about \$150,000.

The CHAIRMAN. How much more have you got to spend?

Admiral ENDICOTT. This will equip it for a few years. We are still within the estimate made by the Boston experts who went over the yard.

The CHAIRMAN. Do you find that it is going to work an economy?

Admiral ENDICOTT. Yes, sir; in labor and attendants and in the consumption of fuel. The additional story to building numbered 31, that is the clothing factory—they do an immense amount of work in that line and they want to put another story on one of those buildings. I think that is the most important.

The CHAIRMAN. Is that a very large building?

Admiral ENDICOTT. Yes, sir. They handle practically all that work for the entire Navy at that yard.

The CHAIRMAN. The next item is navy-yard, League Island, Pa. Please point out the important items.

Admiral ENDICOTT. I think the storehouse for ordnance for storage of ordnance stores is very important, \$46,000.

Mr. KITCHIN. Is this at League Island?

Admiral ENDICOTT. Yes, sir.

The CHAIRMAN. Have they not a storehouse there now?

Admiral ENDICOTT. They have a shop which they use for storage to some extent.

The CHAIRMAN. It seems to me I saw several little storehouses for ordnance down below. What other items?

Admiral ENDICOTT. Thirty-one thousand dollars for a storehouse for lumber is important. We have been asking for that several years.

The CHAIRMAN. Have you not any place to store it now?

Admiral ENDICOTT. No, sir; it is stored out in the open.

The CHAIRMAN. Is that for your Bureau?

Admiral ENDICOTT. No, sir; it is for supplies and accounts.

Mr. LILLEY. What do you do with lumber there?

Admiral ENDICOTT. Store it out in the open.

Mr. LILLEY. No; I mean what uses do you have for lumber; there has never been a ship repaired or built there?

Admiral ENDICOTT. Yes, sir; vessels come there for repair.

The CHAIRMAN. Please indicate what other items you think are important.

Admiral ENDICOTT. To continue retaining wall about reserve basin, \$50,000; I think that is important. That is a portion of the fresh-water basin.

Mr. KITCHIN. You ask for \$50,000?

Admiral ENDICOTT. Yes, sir; they asked for \$150,000 at the yard.

The CHAIRMAN. How much is it going to cost to finish it?

Admiral ENDICOTT. Considerable money. It is to be a very large basin. It will cost about \$2,000,000 to complete.

The CHAIRMAN. Do you use it a great deal?

Admiral ENDICOTT. Yes, sir.

The CHAIRMAN. Do many ships go there?

Admiral ENDICOTT. Yes, sir. It is the principal place where vessels are stored in ordinary. Then the "sea wall extension" is important. That is to extend along the front, west of the new dry dock. And also the item for "berths for receiving ships, \$25,500." There are two receiving ships there now, and they occupy space right in the working front of the yard. We should also have something for grading and paving. You might make it something smaller—\$15,000. I think the electric elevators should be appropriated for. They are for the general storehouse for supplies and accounts and the yards and docks shop. There is an item of \$100,000 for a hydraulic dredge. Before that water front is completed, and this fresh-water basin is completed, there will be about 4,000,000 cubic yards of material to be excavated. It is costing us too much. There is an agreement or combination or an association among the dredge contractors, and we are paying about 22 cents a yard for that material. I think that is fully 50 per cent too much, and sometimes I think it could be done for less than half.

Mr. ROBERTS. How do they dispose of the material they take out?

Admiral ENDICOTT. At present they are using it for filling in.

Mr. ROBERTS. How is it handled?

Admiral ENDICOTT. By the hydraulic system.

Mr. ROBERTS. Do they run it off in pipes?

Admiral ENDICOTT. Yes, sir. That is one of the cheapest ways of handling material. I have rejected bids and invited them again, but I can not get the price down to a reasonable amount.

Mr. ROBERTS. How much has already been spent for dredging?

Admiral ENDICOTT. I gave you a statement two years ago. I do not know just what it is now. A great deal has been spent there.

Mr. ROBERTS. What proportion of the whole dredging has been done?

Admiral ENDICOTT. I suppose two-thirds of the whole.

Mr. ROBERTS. About 8,000,000 yards?

Admiral ENDICOTT. I think there has been that much.

Mr. ROBERTS. And about 4,000,000 yards more?

Admiral ENDICOTT. Yes, sir. A great deal of the filling was done by the War Department. All the material removed from the upper Delaware when they removed Smith Island came down and was used for filling in.

Mr. ROBERTS. You think it would be economy to buy a dredge?

Admiral ENDICOTT. Yes, sir.

Mr. LILLEY. We have paid the contractors for doing two-thirds of the work and now we buy a dredge?

Admiral ENDICOTT. Some of this work was done for 11 cents a yard. That was the softer portion of it; but for three years they have put up the price. The War Department has had to do the same thing. They have had to buy dredges and operate them themselves, because of the high prices bid by contractors at some points.

Mr. LOUD. If they thought the Government was going to build a

dredge, and that they could not get over 11 cents, do you not suppose that they would come to time?

Admiral ENDICOTT. This we are now contracting for at 22 cents could not be done for 11 cents, because it is hard material; but I do not think it should be over 16 or 17 cents.

Mr. LILLEY. Would there be any use for the dredge after you got this job done?

Admiral ENDICOTT. Dredging from time to time is necessary at all of the navy-yards.

Mr. LILLEY. Can you move it around?

Admiral ENDICOTT. Yes, sir; it can be towed anywhere.

Mr. LILLEY. We do not own a dredge anywhere?

Admiral ENDICOTT. We have a little one at Pensacola. It belongs to the War Department and we borrowed it.

Mr. LOUD. What became of the dredge at Charleston?

Admiral ENDICOTT. That belongs to the War Department.

Mr. LOUD. Where is that?

Admiral ENDICOTT. It is there. They expect to continue to dredge in Charleston Harbor and the dredge is stationed there permanently. The city of Philadelphia has had the same trouble with the contractors and during the last fall they have rejected bids. The contractors practically control the price. They divide up the area along the coast among themselves.

Mr. KITCHIN. Please give us an estimate of the total cost of the retaining wall and the sea wall when completed.

Admiral ENDICOTT. Around the reserve basin?

Mr. KITCHIN. Yes, sir.

Admiral ENDICOTT. The cost of the wall will be about \$640,000. The piers will cost about \$300,000. There is an estimate for the extension of the reserve basin to continue dredging in case you do not authorize the purchase of the dredge.

Mr. LILLEY. Have you immediate use for this basin?

Admiral ENDICOTT. It is being used now.

Mr. LILLEY. Could you not use the one at Portsmouth or some other place?

Admiral ENDICOTT. There is no fresh-water basin in any other navy-yard.

Mr. LILLEY. None at Portsmouth?

Admiral ENDICOTT. No, sir; all salt water.

Mr. LILLEY. I thought it was right on the river?

Admiral ENDICOTT. It is; but it is right near the coast, and the water is salt. Then, we want \$100,000 for the power plant.

The CHAIRMAN. Have you expended any of the appropriation heretofore made for that purpose?

Admiral ENDICOTT. Yes, sir; but that much is needed. Another important item is for the extension of piers on the water front—\$120,000—adjacent to the new dry dock. That is an important item.

Mr. KITCHIN. Please embody in your statement the total cost of these various navy-yards or the total amount expended on them up to the present time.

Admiral ENDICOTT. The cost to date?

Mr. KITCHIN. Yes, sir; of the various navy-yards.

Mr. ROBERTS. Did we not have that last year?

Admiral ENDICOTT. I publish in my annual report every year the appraised value of the navy-yards, but that does not represent the original cost.

Mr. LILLEY. Is that the original cost, minus a certain amount charged for depreciation?

Admiral ENDICOTT. Yes, sir. If a building is twenty-five or thirty years old we put a low estimate on its value. That figures up to about \$82,000,000 or \$83,000,000.

Mr. KITCHIN. Probably that would be a satisfactory answer to my question.

Admiral ENDICOTT. My report for this year will contain that data brought up to date, that is a little more, but I do not think it exceeds \$85,000,000.

Mr. LOUD. I would very much like to know what has gone into the Boston yard since it went into commission?

Admiral ENDICOTT. How much has gone in since it was opened?

Mr. LOUD. Yes, sir.

Admiral ENDICOTT. We can tell that readily. It is \$12,455,069.72.

The CHAIRMAN. The next item is navy-yard, Washington, D. C. Please point out the important items.

Admiral ENDICOTT. Paving and grading are important. That is for the new portion of the yard, and the purchase of additional land which was up before you last year, I think, is a very important matter. I would like to show you why I think it is important. It is connected with this matter of the abolition of grade crossings in the city of Washington. The law requires that all grade crossings shall be abolished by the 1st of July, 1908, and the branch from the Pennsylvania Railroad which comes into the navy-yard crosses all the streets at grade, and they have to be abolished in some way. They would have to tunnel or build an elevated railroad if the present line be retained, which would be very costly and very inconvenient to us, but it has been proposed to abandon the present branch to the navy-yard and to put in a switch up near where the bridge crosses the Eastern Branch and come down along the water front to the navy-yard on the east. They are coming now down here [indicating on map]. Our yard is here [indicating on map] and here all the sidetracks are. The switching yard ought to be on the eastern side when this change is made by the Pennsylvania Railroad, and we need to purchase two squares here [indicating on map] on the water front for a yard for sidetracks and switches.

The CHAIRMAN. A railroad yard?

Admiral ENDICOTT. Yes, sir; so that when they bring loaded cars to us they can put them in the yard and they can lie there until we take them with our locomotives and haul them to the storehouse or shops where they are to go and empty them. They are then brought back here [indicating on map] for the railroad to take them away.

The CHAIRMAN. Would not the railroad do some of that for the business they get from the Government?

Admiral ENDICOTT. They will build the branch and obtain the right of way along the water front without any cost to us if we will provide the yard and make the changes within our limits.

The CHAIRMAN. How much land can you get for \$161,872?

Admiral ENDICOTT. A little more than 5 acres. It is water front.

It is the most valuable land, of course. That would be an average of about 70 cents per square foot.

The CHAIRMAN. You can buy land for 70 cents up in the finest residential part of the District, up on the hill where they are just opening it, just off of Massachusetts avenue.

Mr. LILLEY. What do they ask for that land a square foot?

Admiral ENDICOTT. Seventy cents.

Mr. LILLEY. Do they know that we have to have it?

Admiral ENDICOTT. This is on the water front. We do not necessarily have to pay that, but that is put down as an estimate of the outside cost.

The CHAIRMAN. Who owns that land?

Admiral ENDICOTT. I think that land is owned or controlled by real estate men. There is one man who owns a great deal of land there. I think his name is Weller. He owns a portion of it.

Mr. ROBERTS. Do you know that you can buy those two blocks for \$161,000?

Admiral ENDICOTT. They say they will sell it for that amount.

Mr. LILLEY. I guess there is no trouble about buying it; it is probably worth about \$30,000. It is a lot of wild land, as I remember it.

The CHAIRMAN. Are there any houses on the land?

Admiral ENDICOTT. There are small improvements which do not amount to much. The improvements are estimated at \$3,000. The procedure has been to place the limit of cost and authorize the Secretary to purchase by condemnation if he can not get it at a reasonable price.

The CHAIRMAN. What other items do you regard as important this coming year?

Admiral ENDICOTT. Next to the railroad item, the railroad bridges and tracks, cost \$40,000.

The CHAIRMAN. Why do you regard that as important?

Admiral ENDICOTT. Because we have got to do something to make a new connection with the Pennsylvania Railroad. The present connection with the Pennsylvania Railroad has to be abolished.

The CHAIRMAN. When will it have to be abolished?

Admiral ENDICOTT. The law requires that it shall be done by the 1st of July, 1908. Now, if they come in on the east of this new branch, whether we buy this additional land or not, we have to change the tracks inside the yard and we have to build a bridge over a marine railway and slip at that portion of the yard in order to connect with that track.

Mr. ROBERTS. That has to be done anyway?

Admiral ENDICOTT. Yes, sir; or else we lose the connection with the Pennsylvania Railroad and would have to depend upon hauling by teams. I do not know how they could get a gun in there. Guns come by rail, and also coal and forgings and everything that that navy-yard buys; and some things we ship from the yard by the Pennsylvania Railroad.

Mr. ROBERTS. It would be more expensive if we handled it by teams?

Admiral ENDICOTT. Yes, sir; it would be impracticable. We have got to get ready by the 1st of July, 1908; otherwise, the Government is standing in the way. I suppose the railroad would tear up their branch; they would have to under the law.

The CHAIRMAN. Does that cover about all?

Admiral ENDICOTT. No, sir; the new foundry is very necessary, costing \$100,000.

Mr. LOUD. We went into that very fully last year?

Admiral ENDICOTT. Yes, sir. Most of these buildings have been before you for two or three years. All these buildings are for the Bureau of Ordnance, Admiral Mason.

Mr. LOUD. Is it not possible to put a foundry there that will take care of the smaller castings and still retain the present foundry, rather than to go ahead and build a new one simply because that is not quite large enough?

Admiral ENDICOTT. Build one for smaller work on a smaller scale?

Mr. LOUD. No; take out all the smaller castings which take up so much storeroom, and that will give the foundry plenty of room for the large work which they are doing.

Admiral ENDICOTT. What would you do about the small castings, purchase them?

Mr. LOUD. Purchase them, or put up a small foundry to take care of that part of the work.

Admiral ENDICOTT. I do not know that that would reduce the cost materially. I do not know that that would be practicable.

Mr. LOUD. If it is feasible?

Admiral ENDICOTT. It does not seem to me that it would be a good plan.

Mr. ROBERTS. What is the necessity for the quay wall down there?

Admiral ENDICOTT. That is very important. The depth of water in front of the quay wall is not sufficient to bring in much more than a tug. The wall was built fifty or sixty years ago for shallow-draft vessels.

The CHAIRMAN. You do not have many vessels lying there, only the *Mayflower* and the *Dolphin*?

Admiral ENDICOTT. No, sir; occasionally we have other vessels there.

The CHAIRMAN. It is not a navy-yard; it is more of a gun factory.

Mr. ROBERTS. Is there not water enough to get the boats up that take the guns to Indian Head?

Admiral ENDICOTT. Yes, sir. We want to get the same depth of water that the War Department is making up to the navy-yard, 22 feet.

Mr. ROBERTS. Would you bring up any other vessel than the *Dolphin* or the *Mayflower* if you had 22 feet of water?

Admiral ENDICOTT. Occasionally another vessel comes there.

The CHAIRMAN. The next item is "Navy-yard, Charleston, South Carolina." I wish you would furnish the committee with a statement of the total amount expended there up to date.

Admiral ENDICOTT. The total amount appropriated for that yard is \$3,399,068.93.

Mr. LILLEY. And the total amount of business. Are you doing any business at Charleston?

Admiral ENDICOTT. No; the yard is not ready for work yet.

Mr. LILLEY. How many feet of water have you there?

Admiral ENDICOTT. About 30 feet.

Mr. LILLEY. I mean to get in there?

Admiral ENDICOTT. On the bar?

Mr. LILLEY. Yes, sir.

Admiral ENDICOTT. They have about 27 or 28 feet at low water.

Mr. LILLEY. How much water do your largest vessels draw?

Admiral ENDICOTT. About 27 feet.

Mr. LILLEY. You are liable to have them drawing 40 feet in the next ten or fifteen years?

Admiral ENDICOTT. That is at low tide, Mr. Lilley. A big battle ship draws 27 feet.

Mr. LOUD. Is there any immediate need for that yard?

Admiral ENDICOTT. No more than has existed for several years since we commenced it—commenced to build a dry dock and to make other improvements there. Now, it is a question of going on and spending a considerable further sum to make what we have there available and useful or to discard what we have there.

The CHAIRMAN. The dry dock is finished?

Admiral ENDICOTT. It is nearly completed.

The CHAIRMAN. As soon as it is completed I suppose you will begin doing repair work there?

Admiral ENDICOTT. Yes, sir.

The CHAIRMAN. Have you sufficient shops there at the present time to do repair work?

Admiral ENDICOTT. They are not all fully equipped, but the most important shops have been built and completed, and the different departments are installing the machinery.

Mr. LOUD. Are not the present yards amply able to take care of the present ships?

Admiral ENDICOTT. Yes, sir; in time of peace.

Mr. LOUD. Would it not be better to leave that yard ready and not put it in operation, and to keep those yards in commission full of business?

Admiral ENDICOTT. That could be done; it was done once with respect to some other yards.

Mr. LOUD. Would it not be the better policy?

Admiral ENDICOTT. It may be done in time of peace.

Mr. LILLEY. Do you not think it was all folly to ever start this yard?

Admiral ENDICOTT. No, sir; I do not think it was folly. I think it is a good idea to have one good yard south of Hatteras somewhere. I do not believe in making it a yard of the first class. I believe in having good docking facilities there, and facilities for moderate and ordinary repairs on that part of the coast. I think with the long extensive coast that we have it is important to have good docking facilities at intervals. I do not believe in making it like the New York or Philadelphia or Mare Island yards, however.

Mr. LILLEY. In time of war are we going to need a great many yards for repairs? In the last naval fight there was not any opportunity to repair. Suppose the Russians had had yards, they would not have had any use for them?

Admiral ENDICOTT. The Russians did not have much facility for repairs, but many of their ships were badly damaged and needed extensive repairs.

The CHAIRMAN. I would like to ask you whether you carried out at this yard the scheme of consolidating the buildings?

Admiral ENDICOTT. No, sir; it was not done. The request came to Mr. Moody from the Senate to submit estimates for a yard on the

largest scale and such works as the different bureaus could carry on with advantage during the next year, and all the bureaus came in with their projects and Mr. Moody considered the matter of consolidation, but he thought he would not undertake it.

Mr. KITCHIN. I had an idea that the plan was to consolidate?

Admiral ENDICOTT. I believe each bureau got up a complete system of buildings.

Mr. LOUD. Are they building separate foundries in that yard?

Admiral ENDICOTT. Yes, sir; and separate machine shops, and everything. There is only one thing consolidated, and that is the power.

Mr. LOUD. Is it a reasonable proposition in this new yard to install foundries in each plant?

Admiral ENDICOTT. I do not think so. The plans made for this yard contemplated a consolidation of the workshops, but that feature was abandoned.

Mr. LILLEY. I would like to ask just one question before I go. A man told me the other day that Mare Island would make a good place for airships and all that sort of thing, but was no place at all for a navy-yard; that the channel filled up every year, and that you would have to spend millions of dollars all the time to keep the thing dredged so that you could get a ship up there—and yet I see that you are asking for \$480,000 for that yard. This man said that he lived on the Pacific coast and said that it was throwing money away to expend money on the Mare Island yard.

Admiral ENDICOTT. I do not agree with him. There was a time when it was very expensive to keep the channel open to a sufficient depth.

Mr. LILLEY. Does it not keep filling in?

Admiral ENDICOTT. Not extensively. We have spent some money in the past three or four years for the purpose of improving the channel by means of spar and training dikes and we have increased the depth without any trouble. We have not done any dredging for the last two years, and the *Charleston* left there the other day, drawing 26 feet of water, without any difficulty.

The CHAIRMAN. As to the navy-yard at Charleston, I wish you would point out those things which you regard as necessary this year.

Admiral ENDICOTT. Grading and paving.

The CHAIRMAN. To complete the dry dock, \$50,000, do you need that?

Admiral ENDICOTT. Yes, sir.

The CHAIRMAN. The next item is railroad system extension, \$25,000.

Admiral ENDICOTT. Make that \$15,000. The \$30,000 for the central power plant is necessary. For railroad equipment we ought to have something, make it \$5,000. I think the appropriation of \$34,000 for crane-track extension for the 40-ton locomotive crane which we are transferring from Port Royal to Charleston is necessary. Then there is the heating system extension, \$15,000.

The CHAIRMAN. Have you got the heating system in?

Admiral ENDICOTT. We have the central power plant for heating the various buildings. Make the conduit system \$10,000 instead of \$25,000, and give us \$5,000 for sewers and \$10,000 for electric-system extension. That does not go into the central power plant, but is for the extension of wiring; it is for outside work.

Mr. LOUD. Could not they have one general paint shop?

Admiral ENDICOTT. They have no paint shop there at all, and if one is built it is proposed to make it general for all. At present there is not very much painting.

Mr. LOUD. That would be a very successful plan if they kept it up.

Admiral ENDICOTT. Several of the bureaus have paint shops of their own.

The CHAIRMAN. Does that cover the important items?

Admiral ENDICOTT. No. Some work ought to be done in front of the dry dock, dredging \$98,000, in front of the dry dock and adjacent to it. There is plenty of water out in midstream.

The CHAIRMAN. We gave you \$20,000?

Admiral ENDICOTT. That did not amount to anything. The quay wall—\$50,000—is important.

The CHAIRMAN. Can not you get along without that this year?

Admiral ENDICOTT. I think not. We need to do some work, I think, around the dry dock for berthing the vessels.

The CHAIRMAN. How much more?

Admiral ENDICOTT. Eventually, a very much larger sum.

The CHAIRMAN. If we keep the yard down to do repairing and not make it first class, as seems to be your idea—not to make it a great big yard?

Admiral ENDICOTT. No; I would not, but some of the buildings have been constructed on a large scale. Still, there is no reason why everything else should be carried out on the same scale.

Mr. KITCHIN. I think the indications are that it will be a pretty big yard.

Admiral ENDICOTT. The item of \$100,000 for piers and slips is very important.

The CHAIRMAN. Can not the appropriation for piers and slips be left out?

Admiral ENDICOTT. If you have to cut down it might be reduced, but it ought to be appropriated for.

The CHAIRMAN. At Norfolk you are asking for \$1,288,200. Please point out the important items.

Admiral ENDICOTT. Give us \$10,000 for paving and grading instead of \$25,000, \$8,000 for railroad-track extension, and \$100,000 for concrete granite dry dock, to complete. That is the dock which is nearing completion.

The CHAIRMAN. Is that necessary?

Admiral ENDICOTT. Yes, sir; that is the balance, the last appropriation to make. Piers and slips, additional, \$50,000; I think that is very important. That yard is crowded with vessels at all times.

Mr. KITCHIN. Is that dry dock No. 4?

Admiral ENDICOTT. No. 3, the dry dock now nearing completion.

Mr. KITCHIN. What about this one, No. 4?

Admiral ENDICOTT. That is a proposed dry dock to cost \$250,000, a small one for handling tugs and small gunboats.

Mr. KITCHIN. No. 5, to cost \$1,375,000, that is a new proposition?

Admiral ENDICOTT. Yes, sir. That is to be a dock of large size, one to take the largest battle ship. There ought to be one at the Norfolk yard.

The CHAIRMAN. How many docks have you there now?

Admiral ENDICOTT. Three, including the one nearing completion.

The CHAIRMAN. That will take the largest battle ship?

Admiral ENDICOTT. I understand this battle ship is to be not over 510 feet on the water line, and if so she can be got into the dock.

The CHAIRMAN. I think we had better build one before we go ahead with another.

Admiral ENDICOTT. It will be completed in a few months now. We have not many dry docks, and Norfolk is an important point. That yard should be well equipped with dry docks and everything else.

The CHAIRMAN. It has more docks to-day than any yard except New York?

Admiral ENDICOTT. Yes, sir; it has three. If you want to fit out a large fleet from the waters of the Chesapeake Bay in an emergency it would require an immense amount of work. Of course you could call on Newport News, because they have a couple of dry docks, but the duty upon all the resources of those waters would be inadequate.

The CHAIRMAN. What else is there at that yard which is important?

Admiral ENDICOTT. Some navy-yards in foreign countries have a dozen dry docks. I think England has one yard equipped with nearly 18 or 20 dry docks. They could fit out a whole fleet in a few days, so far as painting and cleaning are concerned.

Mr. KITCHIN. When the matter was discussed before the committee in regard to concentrating these dry docks it occurred to me then that that was a very wise suggestion.

Admiral ENDICOTT. Yes, sir; a few yards should be so equipped. At New York you can not get another one in, there is not room, but Norfolk permits of building several, and one yard on the Pacific coast should be well equipped with dry docks. There is an item for rebuilding coal wharf, which is very important. It is right in the center of the yard and is very much needed. We need also the \$130,000 for a power plant. The telephone-system extension is one of the most important items there. The system is in a wretched condition. The extension of the compressed-air system is important.

The CHAIRMAN. Fifteen thousand dollars?

Admiral ENDICOTT. Yes, sir. You might make the electric-plant extensions \$20,000—that is, for outside work.

The CHAIRMAN. Where do they lead to?

Admiral ENDICOTT. They are transmission lines to the new portion of the yard. We bought about 170 acres, and the Marine Corps has put up officers' quarters and new barracks there, and we are extending in that direction with other improvements.

The CHAIRMAN. Do you need \$20,000?

Admiral ENDICOTT. Yes, sir. They also need a naval prison at St. Helena very much.

The CHAIRMAN. Can not they get along this year without it?

Admiral ENDICOTT. They might. They need it very much, however. There is a training station, and a great number is confined. Machine shop, to complete, \$25,000; that is important.

The CHAIRMAN. Will that complete it?

Admiral ENDICOTT. Yes, sir; they say so. They need a new oil house very much, estimated to cost \$40,000.

The CHAIRMAN. What is the matter with the old one?

Admiral ENDICOTT. It is a little bit of a house, about 20 by 30, and there is danger in flammable oils being stored about the shops. I think that is important. It has been asked for for several years in succession. After that I think probably the improvements to the 100-ton

shears to complete, \$20,000, is the only other item I should mention specially. We have a fine 100-ton shears. It is operated by an old cumbersome chain. It does not answer the purpose. It is not up to date. Construction and Repair has asked us to improve it and I think it should be done.

The CHAIRMAN. The next item is naval station, Key West, Florida, and you are asking for \$251,500?

Admiral ENDICOTT. I think the "dredging and filling in" is the most important item. Make it \$25,000 instead of \$50,000. There ought to be one officers' quarters and a decent house for the commandant, and they need some latrines there, \$3,000. You can give us \$5,000 for grading and paving, and a little extension of the water system, \$2,000. As to the \$12,000 for quarters for the commandant, I think we can put up what is necessary for \$6,000. As to the very last item, the sidewalks along the outside of the station wall, the city has asked us to put up sidewalks there, and I can not do it without special authority of law. They thought they could compel us to do it.

The CHAIRMAN. Is that on our own land?

Admiral ENDICOTT. Yes, sir; it is on our side of the street. It requires a special appropriation.

The CHAIRMAN. Do the people walk along there very much?

Admiral ENDICOTT. Yes, sir; I think we had better do it. It is doing what a private individual would do. We removed the plant from Dry Tortugas and turned it over to the Treasury Department and the Marine-Hospital Service. There are some large steel tanks there for water supply. We want to use them at Key West.

Mr. KITCHIN. Will they not need them at Dry Tortugas for the other purpose?

Admiral ENDICOTT. They will not have so much use for water. We used them for the visiting ships.

The CHAIRMAN. Will not the Treasury Department remove them?

Admiral ENDICOTT. No, sir; we will not get them unless we take them away.

The CHAIRMAN. Are they big tanks?

Admiral ENDICOTT. Yes, sir.

The CHAIRMAN. Do you need them at Key West?

Admiral ENDICOTT. Yes, sir. We depend upon distilling water and what we can catch and store.

The CHAIRMAN. That covers everything?

Admiral ENDICOTT. Yes, sir.

The CHAIRMAN. The next item is navy-yard, Mare Island, California.

Admiral ENDICOTT. I want to say a word or two further about the dredging there. Mr. Lilley raised the point about its costing millions of dollars. I think that you will recall that I was before you two or three years ago, and I thought then myself that unless something could be done to improve the navigation there, without greater cost than then seemed probable, we might as well close up that yard and get a yard somewhere else, and I came before you for an appropriation, not for dredging, but for improving the channel in such a way as to make it self-maintaining, and you have given me, I think, about \$250,000, and we are not asking for any more now.

We have put in training dikes on the other side of the river and spur dikes, which do not interfere with navigation, and they are work-

ing admirably. It concentrates the current, increases the velocity, and that prevents the deposit of material. The prospect is that we will be able to maintain a proper depth there at a very small annual expense. There may be a little dredging once in a while. It has put that yard in a very different position, in my opinion, and we have been so far so successful that we think it warrants holding on to the yard.

The CHAIRMAN. There is a point down below and away from Mare Island, in the channel——

Admiral ENDICOTT. I think you refer to San Pablo Bay. The War Department is improving that. They have dredged a 30-foot channel through there.

The CHAIRMAN. Has there ever been a battle ship up to Mare Island?

Admiral ENDICOTT. The protected cruiser *Charleston* has been up there lately, and drawing, I think, 26 feet and 2 or 3 inches of water.

The CHAIRMAN. But has there been a battle ship there?

Admiral ENDICOTT. No; but they can come there. Still, we have not asked for more than \$480,000. It seems to warrant holding on to what we have and making some moderate improvements.

Of course you want me to cut down these items wherever we can. The railroad system, make that \$5,000; the electric plant extensions, \$10,000; the sewers, about \$3,000. The paving and grading, I think, ought to stand at \$15,000. We very much need that. The heating system extension, make that \$5,000. But we want the whole of that \$100,000 for the central light and power plant. That is part of the consolidation. The telephone system, with extensions, can be made a couple of thousand dollars. I think the electric capstans for the old dry dock are important. They are working them by hand now, and we will connect them up with our electric plant. I think that ought to be appropriated. The extension to building 119, block and copper shop, is very much needed. They are doing a great deal of work of that kind at Mare Island, and they haven't got room to locate the tools.

The CHAIRMAN. Improvements to ship's fitters shop, to cost \$15,000. What would be the nature of the improvements?

Admiral ENDICOTT. They want new skylights and some additional windows, costing \$3,000.

The CHAIRMAN. What do they fit out?

Admiral ENDICOTT. They manufacture fittings for ships, smaller articles.

The CHAIRMAN. Woodwork largely?

Admiral ENDICOTT. Mostly metal. I think the improvements to the buildings 69 and 71, which are the general storehouses, is one of the more important items. They want some ventilators in the building, floor in the attic, and mezzanine floors, and repairs to the roof, \$20,000. It is for two buildings.

Mr. KITCHIN. Those buildings are used for what purpose?

Admiral ENDICOTT. For storage of supplies. They belong to the Bureau of Supplies and Accounts. Improvements to coal cylinders, \$7,500. That is to fit them for the storage of cement. We have no place for the storage of cement. And they want a small workshop for the electrician, to cost \$3,000. They train electricians on that coast.

The CHAIRMAN. Do they have a training school there?

Admiral ENDICOTT. There is a training school down the harbor, but electricians are brought and put under instruction.

The CHAIRMAN. Do you have a workshop at other yards?

Admiral ENDICOTT. We have one in New York for this coast.

Channel moorings, Mare Island Strait, \$9,000. I think that is important. Improvements to the naval prison, \$50,000. This will be an extension of the building.

The CHAIRMAN. How are you off for a prison there now?

Admiral ENDICOTT. We have a prison, an old one, but it is not large enough. The number of enlisted men is increasing, and the number to be taken care of on the Pacific coast is increasing. That is the only prison we have. We have none on Puget Sound.

There is an item for a dispensary building at \$15,000, which should be appropriated unless you appropriate for a medical supply depot to cost \$50,000.

The CHAIRMAN. The next is the Puget Sound Navy-Yard.

Admiral ENDICOTT. We would like \$2,000 for sewers, which is the first item. The work of grading should continue there. I could reduce it some—make it \$15,000 instead of \$25,000.

The electric-light extensions, \$6,000, is an important item.

Those water-system extensions and heating extensions are simply extensions of the distributing plant, and they might be made \$5,000 each. They are now \$10,000 each.

Dredging, to continue. We need that for some dredging around the piers and slips—\$15,000.

Roads and walks, extensions—we should have for that at least \$5,000.

Stone and concrete dry dock, to continue. That is the dry dock authorized last year, and for which you appropriated \$100,000. We ask for \$300,000. I think you might make that \$200,000. With the \$100,000 already appropriated, I think that will be sufficient to carry us through the year.

Central power plant, extensions, \$130,000. That is needed.

For the quay-wall extensions we ought to have at least \$30,000. We changed it from \$55,000 to \$30,000, and we ought to have the whole amount asked there for additional power, \$45,000. That yard is badly off for water-front improvements.

For the officers' quarters, I will say that they are very scarce there. If you can, I think it would be advisable to appropriate for one of those, \$8,000.

Drill hall, gymnasium, and wash room for enlisted men. That is not absolutely necessary this year, but it is something that ought to be provided, so I will pass it over.

The underground conduit system—you can cut that in half and make it \$6,000.

The next item, for electric elevators and fittings, I think can go over this year.

The CHAIRMAN. The next is the navy-yard at Pensacola.

Admiral ENDICOTT. Machinery for central power plant, \$35,000. That and the conduit system, \$2,500, ought to stand. The power plant ought really to be \$70,000. You authorized a plant there to cost not to exceed \$130,000, and appropriated \$60,000 last year, but while I was away the Secretary cut that remaining \$70,000 down to \$35,000. Let it stand at \$35,000, and if before this bill passes we find

that there are contracts made to cover that I will let you know. That is the fifth item.

Naval prison, \$28,000. That is one of the most important items.

The CHAIRMAN. Have you got a naval prison there now?

Admiral ENDICOTT. We have a room in the guardhouse which is a miserable, insanitary place, and is not worth repairing; and, besides, they sometimes have to take care of a good many prisoners down there. As you know, the fleet visits Pensacola often. At every navy-yard we have a little prison for confining a few men for a few days or a week. Pensacola is not near any large prison. One is needed on the Gulf coast of moderate size, as this is designed to be.

The CHAIRMAN. Where do you send those that have been sentenced for some length of time?

Admiral ENDICOTT. We have been building a prison at Portsmouth, N. H., and we have one at Boston. We have put in a rather large one at New York.

The CHAIRMAN. Do you propose to build up one in every yard?

Admiral ENDICOTT. Not regular prisons. We have now a room with a number of cells. Sometimes we have a place about as large as this room with cells for a dozen or fifteen or twenty men for immediate confinement. I think that we need this at Pensacola very much.

Improvements to storehouse building, No. 25, \$5,000. That is for some additional shelving, racks, and so forth, to increase its capacity for the storage of material.

I think there ought to be one officers' quarters there, and there should be a shed for the storage of lumber. Lumber is now stored away in parts of buildings devoted to other purposes.

The CHAIRMAN. The next is the navy-yard at New Orleans.

Admiral ENDICOTT. Yes; that is \$326,300.

The CHAIRMAN. Are you doing much work at that yard?

Admiral ENDICOTT. There are not many ships visiting there; occasionally one goes there. This is for the dry dock, scraping, cleaning, and painting.

The CHAIRMAN. Is there any repair work there at all?

Admiral ENDICOTT. I do not think there is. The constructor's report will show, but I think there is very little. There is a good dry dock there; a fine one.

The CHAIRMAN. What is your idea about this yard?

Admiral ENDICOTT. I would keep it down to a small station; I would not spend much money on it.

Now, at New Orleans we ask for a central electric light and power plant extension. I think that is a proper item and ought to be appropriated for.

The CHAIRMAN. Have you spent any money on that at all?

Admiral ENDICOTT. Yes; we have spent some money on it. If they do anything at all there they will need a central power plant; there is no doubt about that, and we build this up and make it a central power plant for all purposes.

The CHAIRMAN. You got \$50,000 last year, did you not?

Admiral ENDICOTT. Yes, sir; this will make it all that is necessary. There will not be any further extension of that plant unless the yard is considerably enlarged.

Now as to the improvement of the water front, which is the first item, and the levee improvement and grading, they are both impor-

tant in connection with the floating dry dock. That dry dock is first-class, and to make it useful we should have these other improvements. In fact about everything down on that list is necessary eventually, but you can leave something off at present, if you like.

The CHAIRMAN. What would you suggest?

Admiral ENDICOTT. I think the first three items, the improvement of the water front, and the improvement in grading, and the central power plant are probably the most important. That would be about \$290,000.

The CHAIRMAN. Could we reduce them for the coming year?

Admiral ENDICOTT. Well, yes; you could make those first two items one-half, say \$125,000; but as to the power plant, we want to enter into a contract for the whole amount, otherwise there will be two bites of the cherry. Now as to the railroad system——

The CHAIRMAN. Have you got an extensive railroad system there?

Admiral ENDICOTT. No; not extensive. We have got a system there, and it is economy to be able to transfer all of the materials by railroad, and we are building a fine coaling plant there. I don't know but all of the other items might be cut down.

Mr. KITCHIN. How about the central heating plant?

Admiral ENDICOTT. Well, I think we could rest it this year on that. They do not need much heat there, only occasionally, when it is cold. I think they can get along for another year. Those are the most important items.

The CHAIRMAN. We will now go to the naval station at Olongapo.

Admiral ENDICOTT. That is \$690,000.

The CHAIRMAN. You have an item there for dredging and reclamation, \$200,000. Which of these items are the most important for the coming year?

Admiral ENDICOTT. The water system, and some portion of the quay wall, and the power plant. To initiate a power plant we can not go ahead very well for less than \$100,000, because you can not contract for anything for much less than that.

The CHAIRMAN. How about the dredging?

Admiral ENDICOTT. The dredging could rest for another year.

The CHAIRMAN. How about closing the rivers?

Admiral ENDICOTT. I think that is important, for they bring down silt which increases the amount of dredging necessary.

Mr. KITCHIN. What are you going to do with the water from those rivers?

Admiral ENDICOTT. It goes to the bay or harbor through another channel.

Mr. KITCHIN. A natural channel?

Admiral ENDICOTT. Yes. Some of these rivers go down through these marshes and have two or three outlets. They want to cut off one or two that empty right in the yard.

Mr. KITCHIN. Is it the purpose to fill in on that territory that is now occupied?

Admiral ENDICOTT. A good deal of the yard is below grade, and it is to be brought up to grade, and that would have to proceed in case of extensive improvements. But for the moderate scope of improvements contemplated here, it is not necessary to start that just now.

The CHAIRMAN. Then the water system, the quay walls, closing those rivers, the central power plant, and the new buildings started, are the most important.

The next is the naval station, island of Guam. The first item is dredging. What is your idea as to that?

Admiral ENDICOTT. I think it is important. There are only two or three items that amount to anything. That dredging is \$7,500. The water system might be cut down to \$10,000, and the naval station roads about \$5,000.

The CHAIRMAN. Are those a part of the naval station there?

Admiral ENDICOTT. Yes. Those are the most important items.

The CHAIRMAN. How is the fire protection system?

Admiral ENDICOTT. Well, I think you gave us something last year.

The CHAIRMAN. Can that go over?

Admiral ENDICOTT. Yes.

The CHAIRMAN. The next is the naval station, Hawaii.

Admiral ENDICOTT. There are only two items asked for there, grading, curbing, and fencing, \$1,100, and timbers for the piers, \$2,000. I think that those ought to be allowed. They are not asking for anything in the way of new improvements.

The CHAIRMAN. The next is naval station at Guantanamo.

Admiral ENDICOTT. The estimates from there amount to \$704,800. You know we started a dry dock down there.

The CHAIRMAN. If we do not give you any more you will not go ahead with that.

Admiral ENDICOTT. We have spent all excepting a few thousand dollars.

The CHAIRMAN. The next is the naval station at Cavite; extension of building 64, \$7,500.

Admiral ENDICOTT. I think that ought to be allowed.

The CHAIRMAN. You do think that ought to be allowed?

Admiral ENDICOTT. We cut out everything. We had lots of estimates from there; I do not remember how much they amounted to, but a great deal. That extension of building 64—that is a lumber storehouse, and they haven't sufficient room for the storage of material. The other building there is for a boathouse. They have no storage for boats. There is \$1,500 for improvement of naval prison. That is simply to keep the thing up until we get out of there.

The CHAIRMAN. We might want to stay there.

Admiral ENDICOTT. We might; yes. It is a good little yard. That yard has done an immense amount of work since the Spanish war.

The CHAIRMAN. They do not seem to be asking for improvements.

Admiral ENDICOTT. The Department has ordered everything stopped there. I do not make any extensive repairs there without the consent of the Department.

The CHAIRMAN. That shows we could get along without any of these yards if we didn't appropriate a single dollar for them.

Naval station at Culebra, \$2,000.

Admiral ENDICOTT. That is for clearing, grading, and fencing. That ought to be granted. That is a place where there is no local interest.

The CHAIRMAN. The next is naval station, San Juan, P. R.

Admiral ENDICOTT. We have asked something for the marine railway there. It is important. There is a good deal of coaling done

there, and this is for coal. We have to maintain a lot of coal barges, and we have not been able to take the coal barges out; in fact, they need repair, and this is necessary.

The Equipment Bureau is asking for an equipment building, an anchor, chain, and galley shop. They do a little work down there. Vessels visit there quite frequently.

The CHAIRMAN. They have a little repair place at Culebra, haven't they?

Admiral ENDICOTT. No; there is not much there. We have never spent anything there. I think it might be well to allow these; they are small amounts, and it is a very good little station.

The CHAIRMAN. I know, but is it policy to build it up?

Admiral ENDICOTT. There is nothing here that contemplates building it up to any extent. I got estimates from there of over \$2,000,000, and cut them all out excepting two or three things. There should be added, however, \$1,400 for water supply.

The CHAIRMAN. Naval station, Tutuila.

Admiral ENDICOTT. We asked for barracks for native guard, grading and filling, recreation building and fittings, and operating room, a total of \$14,000. I don't think the grading and filling is very important, and that could rest, but the other things I think are important.

The CHAIRMAN. How much of a guard have they there?

Admiral ENDICOTT. They have quite a guard down there.

The CHAIRMAN. They sleep outdoors a good deal, do they not?

Admiral ENDICOTT. I suppose they do a good deal.

The CHAIRMAN. What is the operating room?

Admiral ENDICOTT. The Surgeon-General wants to build a little room for operations, to cost \$1,000. You know there is a ship stationed there and a local guard. I think it would be well to allow that.

The CHAIRMAN. Government landing, Newport, R. I. For steel floats, fences, dredging, and general improvement.

Admiral ENDICOTT. There is only one item of that, \$7,840. I think they are important.

The CHAIRMAN. What have you now?

Admiral ENDICOTT. We have cut out a good deal at that station. They came in for the purchase of additional land which the Senator from that State, Mr. Wetmore, recommended very strongly. We let just this one item stand.

The CHAIRMAN. Is it a part of the station?

Admiral ENDICOTT. It is not a station; it is a landing in Newport for the training station, war college, and torpedo station. It is also a point of call for the Treasury Department vessels, and the War Department also uses it as a landing.

The CHAIRMAN. On Government land?

Admiral ENDICOTT. Owned by the Government. It was decided that the Navy Department should maintain it for all three Departments, the Treasury, War, and Navy, and the Yards and Docks should have charge of it under the Navy Department.

The CHAIRMAN. Steel floating dry dock, \$250,000.

Mr. KITCHIN. Where is it determined to put that if it is authorized?

Admiral ENDICOTT. I think it would go to the mouth of the Patuxet River, Solomon's Island. That is where the Cavite dock was moored and fitted out for towing and where she was tested.

The CHAIRMAN. It would not be moved around very much?

Admiral ENDICOTT. No; I don't think so. Of course it is capable of being moved at any time, if you want to, but I have always thought a floating dock on Chesapeake Bay would be an admirable thing.

Mr. KITCHIN. Don't you think that unless we desire to fit up another naval station down there we had better put this dry dock at Norfolk or at some other point?

Admiral ENDICOTT. One reason why I thought we had better keep it at Solomon's Island is that it would keep vessels away from the navy-yard. I talked with some of the captains who docked vessels on this dry dock at Solomon's Island as to their views about locating a dry dock there, and they thought it would be a fine thing if you have no shore stations. We do not want any navy-yard, although I think some of the advocates have that ultimately in view. My idea would be to have no shore station at all. It is a beautiful, quiet piece of water, and when you want a vessel to go to the dry dock somewhere on Chesapeake Bay for cleaning, painting, and small repairs, instead of sending her to the navy-yard, where she will be tied up for two or three months and where the heads of departments will come in with lots of requests for this repair and that repair, she could be sent to Solomon's Island without taking up any room at a yard, and where she could be cleaned and painted and repaired.

And then again it would take in a vessel with a deep draft or that may have been disabled, and would be drawing a few feet more than ordinarily, and which could not get up to the Norfolk Navy-Yard. The draft at Norfolk Navy-Yard is about 28 feet. I would not favor establishing a navy-yard anywhere on Chesapeake Bay. I think it is entirely useless. I think we need quite a number of minor stations at points along the coast, because the coast is so extensive, but I think they should be kept down within moderate limits. They should be second or third or fourth class naval stations, such that in time of peace you can take a vessel in there to make some slight repairs without overcrowding the more important yards. But in case of war they could be availed of more extensively by temporary provision.

Mr. KITCHIN. The next item, plans and specifications for public works, is increased from \$30,000 to \$45,000. What is the necessity of that increase?

Admiral ENDICOTT. We have been hampered very much in the Bureau in carrying on the drafting and engineering work, and although I can use the different appropriations, for plans and specifications necessary and incident to their construction, I can not expend more than \$30,000 of it in the Bureau. I can spend all I want in the navy-yard; in fact, I can spend ten times that amount at the navy-yards out of this special appropriation, but the law limits the amount which can be spent in the Navy Department proper in Washington. They are afraid of building up a big civil establishment in the Department.

Mr. KITCHIN. So all of this \$45,000 is to be spent in the Department?

Admiral ENDICOTT. Yes. I can employ 20 draftsmen down at Washington Navy-Yard to-day, and set them to work on these plans, but I can not employ them in my Bureau in the Navy Department. I do not beat the devil around the bush in that way. I keep right to the law.

The CHAIRMAN. Do they allow you any more in the legislative bill than \$35,000?

Admiral ENDICOTT. We have asked for an increase.

The CHAIRMAN. But that bill has already passed the House.

The next item, repairs and preservation at navy-yards, \$500,000, which is \$50,000 more than last year.

Admiral ENDICOTT. That is because we have such a large establishment to take care of.

The CHAIRMAN. You will have no deficiency this year?

Admiral ENDICOTT. I never allow any deficiency in that appropriation, because I let things go. But think of the plant that we have there. It is worth about \$85,000,000. Some of it, of course, does not need repairs, and the land is included in that valuation. But all of the buildings and the dry docks and the wharves are very valuable.

Mr. KITCHIN. But then throughout the bill there are other items that carry appropriations for certain specified repairs.

Admiral ENDICOTT. Very seldom for repair. If I want extensions or something in the way of improvements, what a railroad would call "betterments," then I would come to you for it. I do not think that I have asked for any item for repairs. I asked one for Norfolk, that was too expensive for my appropriation. This money is all carefully and judiciously expended, but it is not enough. That would be less than 1 per cent on the total value of the property belonging to the Yards and Docks. Of course that is not quite a fair comparison, because the land does not need any repairs, and the percentage of the cost of the dry dock is comparatively small, because a dry dock that is once built of granite would stand there for a century. The repairs would be to the perishable portions of the steel, machinery, etc.

The CHAIRMAN. This closes your Bureau, I think. I wish you would extend your answers somewhat in the record upon those important items so that we will have full information in regard to them.

[No. 8.]

BUREAU OF STEAM ENGINEERING—STATEMENT OF REAR-ADMIRAL CHARLES W. RAE, ENGINEER IN CHIEF.

MONDAY, *December 17, 1906.*

The committee this day met, Hon. George E. Foss in the chair.

The CHAIRMAN. The first item under the Bureau of Steam Engineering is—

Steam machinery: For completion, repairs, and preservation of machinery and boilers on naval vessels, including cost of new boilers, etc., \$3,500,000.

That is the same as last year?

Admiral RAE. Exactly the same as last year.

The CHAIRMAN. Of course you can not ask for a deficiency.

Admiral RAE. No, sir. We have managed to pull through by cutting down pretty well, and I hope to do the same thing next year.

The CHAIRMAN. Will you have an unexpended balance?

Admiral RAE. There is a small unexpended balance, which goes to foreign accounts. We never know the exact amount of the foreign account until after the expiration of the fiscal year. We set aside practically the same amount every year.

The CHAIRMAN. Has there been any large unexpended balance in the last two years?

Admiral RAE. Not in my Bureau.

The CHAIRMAN. Will you kindly furnish a statement showing how this money has been expended, the \$3,500,000?

Admiral RAE. I can show you practically how it is expended, but I do not know that you would like to listen to it.

The CHAIRMAN. Just put it in the hearing, and also a statement with regard to the appropriation of \$2,000,000. That is the same as last year?

Admiral RAE. Yes, sir. The following is a statement of the expenditure of the Bureau's appropriation for the fiscal year ending June 30, 1906:

Bureau of Steam Engineering.

FINANCIAL STATEMENT.

Amount appropriated for fiscal year ending June 30, 1906 (act approved March 3, 1905)-----	\$3, 905, 000. 00
Amount of deficiency appropriation (act approved May 3, 1906)-----	100, 000. 00
Total for fiscal year 1905-6-----	\$4, 005, 000. 00
Labor in navy-yards and stations in repair of steam machinery, boilers, etc., of naval vessels fitting for sea service, preservation and repair of tools, handling and preservation of materials, stores, etc -----	\$1, 954, 153. 99
Purchase of materials, stores, machine tools, freight, and incidental expenses-----	1, 555, 374. 09

Payments for repairs, materials, freight, and incidental expenses for ships on freight stations--	\$472, 297. 89
Total -----	3, 981, 825. 97
Less refunds by transfers in adjustment of appropriations and deposits by paymasters in transferring accounts -----	82, 412. 68
Total expenditure -----	\$3, 899, 413. 29
Balance in Treasury December 18, 1906, to meet outstanding obligations under appropriation steam machinery, 1905-6 -----	105, 586. 71

The CHAIRMAN. You do not think we could reasonably cut down these appropriations for the coming year?

Admiral RAE. I think not. In fact, I fancy there will be more ships in commission next year than this year, and as we have to exercise very careful supervision to keep within the appropriations, I think it would not be a good policy to cut them down.

The CHAIRMAN. Out of that appropriation you do the work of repairing ships and overhauling ships?

Admiral RAE. Yes, sir; entirely out of that appropriation.

The CHAIRMAN. During the past year what ships have been overhauled?

Admiral RAE. I have a list of the ships that will in all probability be overhauled in the coming year. I have not a list of those which have been overhauled during the past year. Here [exhibiting] is an estimate of the probable expenditures for the coming year for that purpose.

List of ships which will probably be given a general overhaul, 1907-8.

U. S. S. Bailey-----	\$80, 000
U. S. S. Bennington-----	80, 000
U. S. S. Brooklyn-----	40, 000
U. S. S. Cavite torpedo destroyers-----	100, 000
U. S. S. Detroit-----	150, 000
U. S. S. Massachusetts-----	100, 000
U. S. S. New York-----	100, 000
U. S. S. Oregon-----	175, 000
U. S. S. San Francisco-----	100, 000
U. S. S. Solace-----	30, 000
U. S. S. Texas-----	100, 000
U. S. S. Vicksburg-----	10, 000
U. S. S. Wyoming-----	10, 000
U. S. S. Baltimore-----	125, 000
U. S. S. Culgoa-----	25, 000
U. S. S. Marblehead-----	25, 000
U. S. S. Nashville-----	60, 000
U. S. S. Nicholson-----	20, 000
U. S. S. O'Brien-----	20, 000
U. S. S. Yankee-----	20, 000

The CHAIRMAN. Will you please insert that in the record?

Admiral RAE. Yes, sir; I will do so. That is always subject to change. It may be that the ship at first decided to be repaired may afterwards be thrown out, but in all probability another will come in. The estimate usually averages about right.

The CHAIRMAN. Your estimate for incidental expenses—\$5,000—is the same?

Admiral RAE. Yes, sir.

The CHAIRMAN. Could that amount be reduced?

Admiral RAE. I think not. We have had to get along without a good many things that we needed.

The CHAIRMAN. The next item is "Machinery plant, navy-yard, Pensacola, Florida," and you are asking for \$15,000?

Admiral RAE. Yes, sir; that is very necessary. I asked for Pensacola, \$25,000, but it was cut down to \$15,000 by the Secretary.

The CHAIRMAN. What tools do you want to buy?

Admiral RAE. A good many tools for the machine shop. The tools down there are all very old and out of date, and the work done costs more than it would if the machinery plant was in good order and had modern improvements. I think a good many of the tools down there have been in use since the civil war, and some of them before that time.

The CHAIRMAN. Can not you buy such tools as are necessary out of the general fund?

Admiral RAE. No, sir; I think not. They would cost too much.

The CHAIRMAN. The next item is—

Machinery plant, navy-yard, Portsmouth, New Hampshire: To outfit new shops authorized and completed or nearly completed, especially the new boiler and pattern shops, etc.

Admiral RAE. We are completing those shops now and we want to get the appropriation right away so we can get the tools and go ahead, so there will be no delay. The buildings are authorized.

The CHAIRMAN. Are they building now?

Admiral RAE. Yes, sir.

The CHAIRMAN. Both the boiler house and pattern shop?

Admiral RAE. The boiler shop is building, the pattern shop is authorized only.

The CHAIRMAN. Is it possible to have one pattern shop for a whole navy-yard?

Admiral RAE. I do not think there would be any economy in that. You would have to have the same total number of tools in all probability, and unless you changed the whole administration of the yard it would be difficult to do the work of different departments in one shop.

The CHAIRMAN. Last year we gave you \$110,000 for these new shops and this year you are asking for \$50,000 more. How much are they going to cost?

Admiral RAE. It will cost to completely fit a shop anywhere from \$250,000 to more, dependent upon the size of the shop. This is the first installment toward it. The \$110,000 was a large amount. There was an extra amount put in there for a large traveling crane. That is what made it cost so much.

The CHAIRMAN. How much work did you do at Portsmouth last year in your Bureau?

Admiral RAE. Of course at the Portsmouth yard we are building it up from a very bad condition, but I can give you the vessels which were repaired.

Repairs were made to the machinery of the following naval vessels: *Don Juan de Austria*, *Eagle*, *Isla de Cuba*, *Potomac*, *Mayflower*, *Southery*, *Lebanon*, *Dolphin*, *Hannibal*, *Nezinscot*, and *Sioux*, as well as to the machinery of the yard launches and ferry. The repairs to

the *Don Juan de Austria*, *Isla de Cuba*, *Eagle*, *Potomac*, and *Hannibal* were of an extensive nature, involving a thorough overhauling of the machinery. Fifty-three steam-cutter engines were built during the year.

Work has been done for other yard departments as follows: Ordnance, Equipment, and Yards and Docks. Practically all the gray iron and brass castings required by these departments have been made in the foundry. Repairs have been made to all the steam generators in the yard.

The CHAIRMAN. You have somewhere in some report a statement showing the amount of labor and material in your Bureau at the different yards?

Admiral RAE. Yes, sir; we can give you the labor exactly. The material is always the stumbling block, because it runs over from one year to another. Material that was used this year may have been bought last year or the year before.

Mr. KITCHIN. Does your report show the amount of work performed under your Bureau at each of the navy-yards in the country?

Admiral RAE. Yes, sir; the labor is exact. There is no doubt about that. It is only in the material where we have any trouble. The material is turned over to the general storekeeper, and he may have material there which was bought last year and some the year before, and we just make a requisition and get it, but we do not know from what appropriation it came.

Mr. KITCHIN. Is there any inventory of the material at hand taken at these various stations?

Admiral RAE. I suppose there is. That is entirely under the Bureau of Supplies and Accounts.

The CHAIRMAN. You are asking for other shops this year at Portsmouth?

Admiral RAE. Yes, sir.

The CHAIRMAN. How much is it going to cost to build the new shops—refitting and everything?

Admiral RAE. Some of the buildings now used at this yard, as well as some of the tools, are antiquated and entirely unsuitable. A new machine shop has been built, a new boiler shop begun, and an appropriation toward building a pattern shop is available. An additional appropriation will be necessary for completion, as this is a preliminary appropriation.

The CHAIRMAN. Are you not asking for some new shops this year?

Admiral RAE. Yes, sir.

The CHAIRMAN. What are they?

Admiral RAE. There is urgent need that a modern foundry building, forge, and pipe-shop building, coppersmith shop, and blacksmith shop building, erecting shop, and auxiliary power house, with proper equipment to be provided. The secretary called me up and told me that he went over with the Chief of the Bureau of Yards and Docks, who has charge of building all the new shops, what we had asked for, and, as he expressed it, he had "slaughtered them very severely," and he said "if there is anything that you consider very necessary I wish you would write me." So I went to Admiral Endicott and found out what he had done, and wrote the Secretary a letter, which he told me that he would "send along with his blessing." I do not know

whether it came to the committee or not, but I asked especially for buildings at League Island, Mare Island, and Pensacola.

The CHAIRMAN. The next item is—

Machinery plant, navy-yard, Norfolk, Virginia: For machine tools to equip machine and boiler shop extension, \$40,000.

Admiral RAE. That is necessary to equip the shops that have been reconstructed and will require more tools. That amount is required for tools that are necessary to replace tools worn out and in the present shops.

The CHAIRMAN. How about the machinery plant at Boston?

Admiral RAE. The machinery plant at Boston?

The CHAIRMAN. Yes, sir; for additional machine tools for boiler-shop extension. You are asking for it?

Admiral RAE. Yes, sir.

The CHAIRMAN. If it is not allowed, why, of course, you will not need this appropriation?

Admiral RAE. The tools would be placed as well as they could be, even if the extension of the building was not allowed, but it is simply the extension of a building already built to bring it out to the building line and give us a much increased floor space which is very necessary.

The CHAIRMAN. How about the machinery plant at New York?

Admiral RAE. That is simply to supply the shops already in existence, tools that are found necessary to replace others that are worn out, and to supply deficiencies.

The CHAIRMAN. At League Island you are asking \$25,000?

Admiral RAE. We have just built some new shops there, and this is for the equipment of those shops. Three of them have been completed entirely. Of course we move all the tools that are in good order from the old shops over to these shops, but it is always necessary to put in new ones on account of the increased size of the shops, due to the continued increased size of the Navy.

The CHAIRMAN. Why should you increase the size of these shops when, as a matter of fact, they are doing very little work at League Island? We have a plant there that cost anywhere from \$8,000,000 to \$10,000,000, and for some reason or other the Navy Department does not send ships that amount to anything there and they do not have any work to do. I have been there, and you can travel for miles through the shops and see comparatively few men working and few tools, and yet they are asking for extensions.

Admiral RAE. The reason you do not see any more men is that we have to keep down the force to correspond to the appropriation, and many of them were probably working on board the ships.

The CHAIRMAN. There seems to be a disposition somewhere to favor certain yards and not to divide up the work.

Admiral RAE. More ships go there now than heretofore; quite a number of ships have been overhauled there.

Mr. LILLEY. It is your intention to have the ships repaired where they can be repaired to the best advantage?

Admiral RAE. Yes, sir.

Mr. LOUD. Are not the Norfolk and New York yards now able to take care of all the repairs, and what is the use of starting up new yards?

Admiral RAE. I do not think they are able to take care of it all. They are very much crowded both there and at Boston. I was in Boston a short time ago, and there were six battle ships there, and with the force on hand they were very hard pushed.

Mr. LOUD. I intended to have included Boston in my question. Those which are in vigorous use and able to take care of the repairs—why urge the opening of other yards?

Admiral RAE. They are sent there because they are the only ones that can take care of them at present.

Mr. LILLEY. Are they crowded down at League Island?

Admiral RAE. Just at present, no. We have just sent two ships there.

The CHAIRMAN. The next item is. "Guantánamo, Cuba." Have you any shops there?

Admiral RAE. No, sir.

The CHAIRMAN. So, if you do not get any you will not need this appropriation?

Admiral RAE. No, sir.

The CHAIRMAN. The next item is—

Machinery plant, naval station, Cavite, Philippine Islands: For additional machine tools required to facilitate repairs to naval vessels on Asiatic stations, twenty-five thousand dollars.

Admiral RAE. That is very necessary. That yard is doing an immense amount of work all the time. It is a question between Olongapo and Cavite, and is a question that never downs. I do not think Olongapo can be made a place to repair ships for years. They have no shops to speak of there, or anything.

The CHAIRMAN. At Olongapo you are asking for \$20,000?

Admiral RAE. Because the Navy Department apparently wants to build up that place.

Mr. LOUD. At Cavite there were two ships being rebuilt, one a monitor and the other a cruiser. Are they still there under repairs?

Admiral RAE. They are completed.

Mr. LOUD. Have you any ships there now?

Admiral RAE. Ships go there all the time.

Mr. LOUD. I mean ships undergoing general overhauling.

Admiral RAE. No, sir.

Mr. LOUD. Those were having a general overhauling?

Admiral RAE. Yes, sir. The *Monterey* was one, and there were two others, small cruisers, *Helena* and *Wilmington*.

Mr. LOUD. It seemed to me as I saw them that it would have been cheaper to have taken them out and sunk them in the China Sea.

Admiral RAE. That yard does a great amount of work.

Mr. LOUD. They had 3,000 men when we were there.

Admiral RAE. Small repairs can be made there without sending the ships here. General overhauling should never be done out there—never. The yard is not properly equipped for it.

Mr. LOUD. I thought it was a mistake at the time we were there.

Admiral RAE. I think so. I do not think it should be done.

The CHAIRMAN. Unless we build shops at Olongapo you do not need the tools?

Admiral RAE. They are putting things in order, and we do require the tools very much, because they have got to have sufficient tools to do light repairing.

The CHAIRMAN. In connection with the dry dock?

Admiral RAE. Yes, sir.

The CHAIRMAN. But nothing beyond that?

Admiral RAE. Not at present; but we do require those tools very much, because we have not much there to speak of, and old buildings are being put in shape in which to install them.

The CHAIRMAN. The next item is—

Engineering experimental station, United States Naval Academy, Annapolis, Maryland—Salaries: One civilian assistant to the director, at three thousand dollars.

Is the director a naval officer?

Admiral RAE. He is; and therefore a civilian assistant director is very necessary. The director has been taken away two or three times to perform extra duties, and when he goes it just stops things for the time being.

The CHAIRMAN. Have you anyone in mind for that position?

Admiral RAE. No, sir.

The CHAIRMAN. How would you get a man—advertise, or go to some of the technical schools?

Admiral RAE. No, sir. There are several applicants for the position already. We would pick out one of the applicants, or we might go to the Civil Service Commission. I think, however, they do not have anybody as high as is required there. Great care would be taken in the selection because it is a place where we want a man of undoubted ability. Last year you gave us all except the civilian assistant director.

The CHAIRMAN. Have you started in there doing any experimental work?

Admiral RAE. These men are all employed erecting the experimental turbine that was purchased from Parsons in England and sent over here. It was brought in free of duty on account of being for experimental purposes. They are erecting it now and getting on toward the time to begin experiments. They will have it all ready in a short time.

The CHAIRMAN. How about the next item, "Contingent," \$1,000?

Admiral RAE. That is necessary for the simple reason that we wish to purchase papers with articles concerning experimental work, in addition to ordinary incidental expenses.

The CHAIRMAN. Could not that be taken care of under the appropriation of \$5,000 for "incidental expenses?"

Admiral RAE. The \$5,000 would not be enough. We find it is all we can do to get along with the other incidental expenses we have outside of this experimental station.

The CHAIRMAN. The next item is "Experimental and research work, \$25,000." Do you require all that amount for the coming year?

Admiral RAE. I think so. That work is going on all the time, and that is the fund from which we pay the expenses.

The CHAIRMAN. Then for buildings you are asking \$50,000?

Admiral RAE. Those buildings are very necessary. We have finished the foundation of the experimental station and the contract for the superstructure has been let. There is no place where the officers can live, and they should soon be permanently there.

The CHAIRMAN. You are not building that now?

Admiral RAE. Yes, sir; we are building the superstructure of the main building, the foundation being completed. The delay was in getting a clear title to the land there. Now we have it all right.

The CHAIRMAN. You have not got it completed yet?

Admiral RAE. No, sir. We are putting up the turbine in a building loaned by the Naval Academy for the time being, but these men will have to be over there while the building is going up.

The CHAIRMAN. How far from Annapolis?

Admiral RAE. About 2 miles by road and the road is very impassable at times and the river for a couple of months is rather difficult to cross, and they should be on the grounds. Besides that two of the buildings would be occupied by naval officers who now get commutation of quarters. In that case they would not. So there is a little offset against that amount. Those buildings should be put up at once.

Mr. KITCHIN. Do you think the buildings suggested there will cost as much as \$20,000 for one and \$15,000 for each of the other two?

Admiral RAE. I think these are much cheaper than the ones at the Naval Academy, and yet this station is part of the academy. The price of construction has gone up wonderfully in the last three years. I doubt whether it is enough, but I discussed that with the director, and he said he thought it would possibly do.

Mr. KITCHIN. This does not include the cost of the land?

Admiral RAE. No, sir; the land now belongs to the Government. The cost of the new quarters, unfurnished, at the Naval Academy for the commandant of midshipmen—the director is a commander and will shortly be promoted, so it is a comparable statement—was \$34,000, and we ask for \$20,000.

Mr. KITCHIN. The Naval Academy has a \$10,000,000 limit, and in the opinion of a great many people they have been quite extravagant in the expenditure of the same.

Admiral RAE. Another thing. The Quartermaster-General has made a statement, I think, that the cost of construction has gone up 30 per cent, or something like that, in the last year and a half or two years.

The CHAIRMAN. Under civil establishment the items are the same except as to Cavite?

Admiral RAE. That is not an increase in money. Those people before were paid from the navy contingent, and I want to get them on the civil establishment, where they properly belong; but the money is just the same. It is not an increase. It is shifting them from the navy contingent to the civil establishment.

The CHAIRMAN. There was a proposition introduced by a Member of the House to limit your working appropriation of \$3,500,000 to repairs under 10 per cent, or to make the same percentage that is now applied to wooden ships applicable to steel ships as well, so that whenever there is any question of overhauling or any repairs in excess of that amount you would submit a general estimate to Congress.

Admiral RAE. That is a question of administration. Of course, if Congress thinks that would be the better way to do it, it could be done, but I doubt very much whether it would be more economical to the Government, and it might create great delay when we want to

overhaul a ship and do not anticipate it in time to get it up to Congress.

The proposition to limit repairs of steel vessels to those less than a certain percentage of the value of the ship might possibly be advantageous so far as protected cruisers and other unimportant vessels are concerned, but should not apply to armored cruisers, battle ships, and torpedo boats, except such as are of so faulty or obsolete design as to carry a reasonable doubt as to the advisability of continuing them longer in service. The reasons governing the advisability of overhauling vessels may be greatly different in nature: cases may arise where the hull of a vessel will require but few repairs, whereas steam-engineering repairs alone, or together with ordnance and equipment repairs, might involve considerable expense. In many such cases it would appear to the Government's interest to overhaul the vessel rather than to condemn her and have her replaced by a new vessel. It would, therefore, appear that each case should be considered upon its own merits by the Department, this matter being left entirely to its discretion.

If this matter must be made the subject of legislation, 25 or 30 per cent would seem to be a fairer estimate, the Department to use its discretion below the percentage established for the reason that it might not be advisable to repair vessels of an obsolete type at less expense.

As regards the proposition for the Congress to specifically appropriate money for general overhaul, each ship by name, I consider that such a policy would entail great loss of time and long periods of waiting for authorization and money to carry on necessary work, possibly doubling the time during which the services of a vessel would be lost to the Government.

As a whole, in both cases, in my opinion, the present method appears to be the better one.

The CHAIRMAN. Is there anything further which you desire to say to the committee?

Admiral RAE. I sent a letter to the Secretary in regard to buildings at the Mare Island Navy-Yard. They are very necessary. We are going to build a collier out there. The Secretary told me to write a letter on the subject, which I did, and I took it to him personally, and he said that he would send it along with his blessing. Whether it came to the committee or not, I do not know. This is a copy of the letter which I sent to the Secretary:

DEPARTMENT OF THE NAVY,
BUREAU OF STEAM ENGINEERING,
Washington, D. C., November 19, 1906.

SIR: 1. This Bureau is informed that, in the estimates submitted by the Bureau of Yards and Docks, under the head of "Public improvements," for buildings to be used by this Bureau, the following are a few of those not approved by the Department, and which the Bureau considers absolutely essential for the proper performance of the work under its cognizance.

Item 1. Navy-Yard, League Island, Pennsylvania: Administration building and drafting room, \$20,000.

Reason: The offices are located in the new shop building, which is barely sufficient in size to carry on the work, it being necessary to move from the old offices in order to make room for the general storekeeper.

Item 2. Navy-Yard, Mare Island, California:

(a) Administration building and drafting room, \$20,000.

Reason: The present office, etc., are in one corner of the general storehouse, and the Bureau of Supplies and Accounts has already requested that they be vacated in order to make more room for stores.

(b) Pattern shop, \$60,000.

Reason: The present shop is the upper floor of the present machine shop. It has been necessary to remove a large portion of the flooring in order to install the traveling cranes for use in the building and erection of the machinery for the collier *Prometheus*.

(c) Extension of machine shop building, \$125,000.

Reason: The present machine shop is entirely too small to cope with the increasing work of this yard, and, with the addition of the work on the collier, the output will be decidedly decreased owing to the congested condition.

Item 3. Navy-yard, Pensacola, Fla.

(a) Machine shop, \$40,000.

Reason: Owing to the increasing work at this station, the Bureau considers this very essential. The present facilities are extremely limited.

(b) Administration building and drafting room, \$20,000.

Reason: The present office is a small room only and entirely inadequate.

Very respectfully,

C. W. RAE,

Engineer in Chief, U. S. Navy, Chief of Bureau.

The SECRETARY OF THE NAVY.

That letter was sent to the Secretary and he said he approved it. To build the collier out there it will be necessary that the large traveling crane should be used in the machine shop from one end to the other, and we have torn down consequently a portion of the floor which formed the pattern shop to allow the crane travel. Now, we require a pattern shop and we require an administration building. Our offices are in the Bureau of Supplies and Accounts' storehouse and they have told us to get out, and we have no place to go. The extension of the machine shop is the most pressing necessity, as stated in the letter to the Secretary. The congestion is already acute and will be worse when the machinery for the *Prometheus* is building.

[No. 9.]

STATEMENT OF CAPT. ALBERT ROSS, COMMANDANT OF THE
NAVAL TRAINING STATION, GREAT LAKES.

The committee met at 10.30 o'clock a. m., Hon. George E. Foss (chairman) in the chair.

The CHAIRMAN. You are the commandant of the naval training station at the Great Lakes?

Captain Ross. Yes, sir.

The CHAIRMAN. I wish you would tell us how you are getting on out there in a general way.

Captain Ross. We made a very fair start and proceeded with the work on the main bridge, and laying the water mains, the digging of the harbor, and building the levees, but on account of the cutting of the lake front have been compelled to throw in a series of cribs. With our facilities the cribs are not all as strong as they should be, and as a result two of them have been swept away as a result of storms. About one-third of the harbor has been dug, the contractor having struck all sorts of difficulties, not only in digging the harbor, but in holding the material which is taken from the harbor, a blue clay of the oiliest nature, and it is almost impossible to retain it.

The CHAIRMAN. You have let the contract for the deepening of this basin, have you?

Captain Ross. Yes, sir.

The CHAIRMAN. What is the amount of the contract?

Captain Ross. The amount of that contract was \$35,000. That is, we had two jobs at the same time. We dug the basin at the same time that we filled the ravines necessary to be filled on account of the layout requiring certain buildings to be located over these ravines.

The CHAIRMAN. You say the storm has washed away that shore?

Captain Ross. When I took possession of the property the lake front was intact, with a beach of 25 to 30 feet in front of it, so that you could drive from the station to North Chicago. At present the whole north front has been washed away. The encroachment has been more this year than ever before, and part of it may be due to some cribs that have been put in above us by the North Chicago Improvement Company.

The CHAIRMAN. Now, you want to protect that, to make a protection there?

Captain Ross. We want to protect that.

The CHAIRMAN. What will it cost you?

Captain Ross. I think we can do that with the funds we have. We have asked for \$10,000 in the next year's maintenance.

The CHAIRMAN. What other work has since been done out there?

Captain Ross. The water mains have been practically completed,

and all have been tested with the exception of the 12-inch mains, which can not be tested until the mains are run across the bridge. A contract has been let for that purpose, and as soon as the bridge is completed those mains will be run across and the 12-inch mains tested, and that will complete the water mains.

The CHAIRMAN. This year you are asking for—

Electrical mains and conduits, heating mains and concrete conduits, heating station equipment, power-plant equipment, water-supply and sewage disposal, two hundred thousand dollars.

What are those electrical mains?

Captain Ross. In the work we have in hand we are going to put down the electrical mains, the water mains, and sewer mains, and all the water and electrical and sewer work before we put the buildings up. Those electrical mains are the mains which you see laid down in any city, with the ordinary earthenware conduits; but they will be required to carry wiring all over 282 acres of land.

The CHAIRMAN. What is the heating station equipment?

Captain Ross. On account of the conditions there that power house will have to go on the beach and out in the lake, and in the heating proposition what is desired is the hot-water system.

The CHAIRMAN. Hot water and hot air?

Captain Ross. Hot water. The idea of that is that we propose to take 1,800 horsepower or boiler power and conduct that through 150 kilowatts electric power. Then with that we steam, and we propose to heat the whole of that institution. The difference between steam and hot water is just this: It will require the same plant to put the live steam in, but the cost of maintenance year after year is going to be immense, the question of packing of valves and covering the pipes, the protection of the pipes, of lagging, and so forth, is going to be very expensive, whereas with hot water that will not enter.

The CHAIRMAN. You believe that will be more economical?

Captain Ross. Yes; decidedly more economical; and more than that, you have the control of the heat.

The CHAIRMAN. You speak about the water supply and the sewage disposal.

Mr. ROBERTS. Before we leave that, may I ask the Captain a question?

The CHAIRMAN. Certainly.

Mr. ROBERTS. It is the design to heat all the buildings from the central heating plant?

Captain Ross. Yes, sir; from the central heating plant.

Mr. ROBERTS. Have you any question as to the possibility of sending the water over those lines?

Captain Ross. No, sir; none whatever.

Mr. ROBERTS. You can keep up heat in the pipes?

Captain Ross. That is the point of these conduits. These conduits are made of reenforced concrete. They are large enough for a man to walk through, and we will have control of those pipes so that instead of digging up your grounds those conduits will be open so that all our water mains and steam mains and sewerage will be in the conduit, and the roof of that conduit will be the sidewalks.

Mr. ROBERTS. Is it your idea to run your electric wires in the same conduit?

Captain Ross. No; you can not do it.

Mr. ROBERTS. What is the objection to that?

Captain Ross. In the first place, it would require very much more of a main and the use of terra cotta. You run your electric wires through, and you put them right in the ground, and it is right there just as it is in the city.

Mr. ROBERTS. Would it not be desirable to run these electric wires in this tunnel, as I understand it is, as far as practicable, and then continue, where you have to go beyond the tunnel, with the pipe?

Captain Ross. The cost would be very much more, and there is a question of the electrolytic action there. They do not want the water mains and electric mains together if they can help it.

Mr. ROBERTS. If I understand correctly, the plan is to make a tunnel, like, and in this tunnel you will carry your steam pipes and hot-water pipes and your sewer pipes?

Captain Ross. No, sir; such sewer mains as we can carry through there will be carried, but as a rule these are in the front of the buildings and the sewer mains are in the rear of the buildings. Some of them will go in there. Everything we can put in those conduits will go in.

Mr. ROBERTS. I do not understand why you can not install your electric wires in that tunnel without danger of electrolysis. Insulate the attachments and insulate the wires themselves. Then you have your wires where you can get at them conveniently.

Captain Ross. The engineers seem to think that it is not good practice, and the cost will be very much greater.

Mr. ROBERTS. There is great complaint in all the cities now, even, of the underground conduit. They say that the electricity is affecting all the water pipes. So that the electrolysis exists, it seems to me, whether you have your wires in a separate pipe conduit or in the tunnel.

Captain Ross. They would not be in so close contact if they were in the separate conduit.

Mr. ROBERTS. I just wanted to get the idea of it.

The CHAIRMAN. What about this water supply and sewage disposal? What is that going to cost you?

Captain Ross. The filtration plant and the sewage disposal will cost \$75,000.

The CHAIRMAN. For the whole thing?

Captain Ross. That is just the plant itself; none of the connections. The preparation of the ground does not come into that. For instance, the sewage-disposal plant will be on the south side of the harbor, and there is a sort of hogback there. We shall have to cut both ways. First, we will have to drive the sheath piling out in the lake in order to retain this earth, and at a level of 14 feet we put the sewage-disposal plant. The question of the cost of that is still to be considered, because if we can we want to cover the septic tanks over with earth and sod them down, so that it will be an attractive feature of the plant. Otherwise they will be of brick and will remain in sight, and it is not a very sightly feature. But the plant we have evolved so far, I think, is the best plant I have found in the country. I have inspected many of them and have found a great many of them that were good, but this system is the best that has been evolved in the country.

Mr. ROBERTS. What is the system? Do you take your sewage into a chamber and then mix some antiseptic or lime with it?

Captain Ross. No; the system is just this: You cut out from your sewage system all your storm water and all street washings, so that you get nothing in your sewer pipes but the ordinary house material from your kitchens and from your water-closets. That is thrown in what are called septic tanks, and there are usually four or six. Now, it depends upon the amount of richness of the material how long it remains in the septic tank. If it is very rich eighteen hours is all that is necessary. It runs from eighteen hours to thirty-six hours. There is a scum which forms on this. It is broken up in this septic tank.

Mr. ROBERTS. How is it broken up?

Captain Ross. There is an agitator.

Mr. ROBERTS. It is done by machinery?

Captain Ross. Yes. There is a scum forms on it about 4 to 6 or 8 inches thick, and in that scum is the microbic and anaerobic action that takes place, of these little microbes eating each other—that is what it amounts to; so that at the end of eighteen or thirty-six hours it is then run off into what is called a basin. Passing before that there is an aerator, and in this case we have decided on a little pump in the basin in front which will throw the matter into the air and make the aeration very much quicker.

Mr. ROBERTS. Can you run that aerator with its fountain out in the grounds in winter? Will it not freeze up?

Captain Ross. No; because the water is warm in it.

Mr. ROBERTS. When it is thrown into the air what does it fall into?

Captain Ross. It falls right back into this little basin, and away it goes from that into the pipes.

Mr. ROBERTS. Do you think that is going to be warm enough so that it will not freeze up?

Captain Ross. If necessary we will put a little frost-proof house over it, and admit the air, which will be warm about it. For instance, at Mansfield, Ohio, they aerate there by means of water steps.

Mr. ROBERTS. A little cascade?

Captain Ross. Yes; a little cascade; and they have no trouble with it at all.

Mr. ROBERTS. Let me ask you, in the process of disposal of the sewage which you propose, do you put any antiseptic in it?

Captain Ross. No; there is no necessity for it. After it has passed through the second bed it is 95 per cent pure and as clear as crystal.

Mr. ROBERTS. Is there not some process in this plant after which a thick residue is left?

Captain Ross. That depends on the intelligence of the man who is going to attend to it. If he is an intelligent man and knows his business there will be very little. The sludge that is deposited in that water, in the septic tank, or that is deposited on the top of the beds in five years did not amount at Mansfield to three cartloads. There was practically nothing in the beds, and they were badly handled.

Mr. ROBERTS. After this scum is taken off, that, I understand, is what is thrown into the air and aerated—the scum?

Captain Ross. No; the water.

Mr. ROBERTS. The whole business. What becomes of the scum?

Captain Ross. The scum disappears with the water. It is a gradual absorption. First it is formed, and this microbial action takes place.

Mr. ROBERTS. Then where is the final product—the water and sludge, and everything together—deposited?

Captain Ross. That goes into the aerator, and from there into the beds, which are about 5 feet deep, composed of slag and granite. Burnt slag is about as good as anything, starting in with lumps from 3 to 4 inches and going right to the top with a gradual diminution until on top it is what is called “buckwheat.”

Mr. ROBERTS. That is a sort of filter?

Captain Ross. That is what it is, and this action takes place in this first bed, but in the second bed there is no action. At Mansfield, which is considered the sample plant of the country, the economics of the question were not considered at all, because for the garbage crematory they had to have the fuel and the pumps, and all that, and all that could have been utilized in the production of municipal lights; and in the handling of the separate tanks they did not even consider whether two tanks would do the work, but they used all four when two would have done the work better than the four.

Mr. ROBERTS. How often does this slag, or whatever you use for filtration, have to be removed?

Captain Ross. At Mansfield it had been in for five years, and they thought they ought to take off about a foot of it on the surface. It was not handled properly. The material was not diffused properly.

Mr. ROBERTS. What becomes of the odor in this process?

Captain Ross. There is very little, if it is properly managed.

Mr. ROBERTS. I suppose the final product is discharged into the lake.

Captain Ross. It is scattered off over there.

Mr. ROBERTS. Yes.

Captain Ross. I took a bottle of it right where it discharged into the little stream at Mansfield. The stream was the color of molasses, and the material of the little cascade going into it was as clear and pure as could be. There was no formation of green material, such as you usually find. I took this bottle to the doctor and asked him what it was, and he said that he did not know, but he took a drink of it before I could prevent him.

The CHAIRMAN. This is the best system that you know of?

Captain Ross. Our system that we propose is, I think, an improvement on the Mansfield system.

The CHAIRMAN. You are asking here for—

Furniture, commandant's quarters, three thousand five hundred dollars, and furniture, six officers' quarters, at one thousand five hundred dollars each, nine thousand dollars.

Will you need all of that money to furnish those quarters?

Captain Ross. This year?

The CHAIRMAN. Yes.

Captain Ross. I am very sure I will not need the furniture for the commandant's quarters this year.

The CHAIRMAN. You can strike that out?

Captain Ross. Yes.

The CHAIRMAN. When do you expect to get this whole plan finished?

Captain Ross. We expect to have the plans completed and the contract awarded before the frost is out of the ground, and the contractor is to have an opportunity to haul in the material and commence the work just as soon as the frost is out of the ground. We want one contractor, if we can get him, and with the methods of a man that is capable of handling a large amount of work of that kind it should be completed in two years.

The CHAIRMAN. In two years?

Captain Ross. Yes. Now, there is a question which comes in there. The Secretary has recommended \$750,000.

The CHAIRMAN. Can we not reduce that?

Captain Ross. No; I should say add to it.

The CHAIRMAN. The final payments will not be made until the end of two years.

Captain Ross. I know, but on that the Secretary can, under the law, enter into contract to the amount of \$1,900,000; but my impression is that if you appropriate \$750,000, if we have any luck at all, the buildings should be completed before the end of two years.

Mr. KITCHIN. This item at the bottom of page 102 says that is to cost \$1,250,000.

Captain Ross. The total is \$1,250,000.

Mr. KITCHIN. This says to cost \$1,250,000. It seems that is the limit of the cost of that.

The CHAIRMAN. The limitation was fixed at \$2,000,000 for those buildings.

Mr. KITCHIN. Two million dollars?

The CHAIRMAN. Last year.

Captain Ross. Last year they appropriated \$750,000.

The CHAIRMAN. That must have been a mistake, \$1,250,000.

Mr. KITCHIN. It says here—

To complete buildings in accordance with the provisions of the act of Congress approved June twenty-ninth, nineteen hundred and six, to cost one million two hundred and fifty thousand dollars, seven hundred and fifty thousand dollars.

Captain Ross. That is for the completion of the buildings over and above the \$750,000 heretofore appropriated.

Mr. ROBERTS. Just one more question in regard to the sewage. I understand you are going to separate the house water from the surface water?

Captain Ross. Yes, sir.

Mr. ROBERTS. How are you going to separate it from the surface water?

Captain Ross. The surface water goes into a little creek and into the harbor.

The CHAIRMAN. Are there any other questions? If not, we will present Admiral Mason to the committee.

Captain Ross. There is one point there, in regard to the Secretary cutting that down, to cost \$393,000. Our original estimates were \$393,000 for the electrical mains and conduits and heating mains and conduits and heating station equipment and power plant and water supply and sewage disposal, for which \$200,000 is appropriated this

year. I wanted the understanding on that, because we are now preparing the plants for the installation of our power plant, and on that I want to install the hot-water system; because it is the economical system for the future work, and in the construction of this institution everything that pertains to economy has been considered. The maintenance will cost the minimum. We are putting in coal and ash handling plants, and overhead bunkers, and the railroad train goes right over the power house; so that it should be a minimum cost, and three men should do all the work in that institution, one man in charge of the refrigerating plant and the pumps, another man in charge of the electrical plant, and a third man in charge of the boiler plant. So you can say that the cost is going to be a minimum.

[No. 10.]

STATEMENT OF BRIG. GEN. GEORGE F. ELLIOTT, COMMANDANT,
ACCOMPANIED BY COL. FRANK L. DENNY, QUARTERMASTER,
AND COL. GREEN C. GOODLOE, PAYMASTER.

THE COMMITTEE ON NAVAL AFFAIRS,
Tuesday, December 18, 1906.

The committee this day met, Hon. George E. Foss in the chair.

The CHAIRMAN. The first item is on page 170 of the bill,:

Pay, Marine Corps: For pay and allowances prescribed by law of officers on the active list, five hundred and ninety-eight thousand one hundred and forty dollars, and for the following additional officers here authorized: One lieutenant-colonel, assistant adjutant and inspector; one lieutenant-colonel, assistant quartermaster; one major, assistant quartermaster; four captains, assistant quartermasters; one major, assistant paymaster; three captains, assistant paymasters; fifteen captains, fifteen first lieutenants, seventy-six thousand and twenty dollars, a total of six hundred and seventy-four thousand one and sixty dollars.

Now, take the first part of that item, \$598,140. That is for the pay and allowances of officers now on the active list, is it?

Colonel GOODLOE. That includes all with the additional ones submitted.

The CHAIRMAN. You submit these additional officers whose pay would amount to \$76,020. Will you please state the necessity for the additional officers?

General ELLIOTT. Sixty-five per cent of the officers in the Marine Corps are serving aboard ships or in the Tropics—that is, taking myself and counting all the staff. They serve two years and two years and six months in the Tropics. There is no relief for them. A man comes home from the Philippines to-day and he will have to be ordered to sea on a battle ship almost to-morrow. We have not officers sufficient to command the men. Then, there is a fearful block in the captains' list of the line. The men are all nearly of the same age. In fact, some of the junior captains in rank are not junior in age to the senior captains. We have asked this promotion in the staff to break this block.

The CHAIRMAN. These are all staff officers?

General ELLIOTT. We have asked that 11 line officers should go into the staff to break the block. Many of the captains are fit for staff officers and like the duty. If they transfer from a captain in the line to a captain in the staff their juniors in the line will pass up numerically in grade. If these promotions are made and 15 captains and 15 first lieutenants for the line are allowed, it will increase the corps by 41 officers. We sadly need these officers. There is no post that has its complement of officers or anywhere near it.

The CHAIRMAN. How are you situated in the matter of line officers?

General ELLIOTT. We are very, very short.

The CHAIRMAN. Which do you regard as the more important, the additional line officers or staff officers?

General ELLIOTT. The trouble is this: If I do not get the staff officers they will take them from the line and make them acting in the staff. We have an acting paymaster in the Philippines disbursing money for 1,300 men. They not only take the line officers away, but the quartermaster and the paymaster want the best. In putting them into the staff it allows a promotion, sometimes in grade when it is a first lieutenant, but if it is a captain he gets no promotion in rank, but it breaks this block in the captains' list, and unless it is done, promotion of the junior captaincy is hopeless. It will be thirty years before he reaches the higher grade.

The CHAIRMAN. How is it in the line; do you have about the same number of officers for each company as the Army does?

General ELLIOTT. We have about half the number that the Army has. We have one lieutenant-colonel to fourteen hundred men. We have one colonel to fourteen hundred men. We have one major to 585 men. We have one captain to 122 men; the Army has one captain to 66 men.

The CHAIRMAN. How are you situated in regard to captains?

General ELLIOTT. We are short still. You take 9,000 men, and a regiment alone requires—let the staff go entirely—44 officers, and multiply that by 9, making 396 for 9 regiments. We have now only 278 officers, line and staff.

The CHAIRMAN. For instance, how many men do you have to a captain?

General ELLIOTT. In our corps?

The CHAIRMAN. Yes, sir.

General ELLIOTT. We have 122 men.

The CHAIRMAN. In the Army how would it run?

General ELLIOTT. If the Army is full, 100,000 men——

The CHAIRMAN (interrupting). As the Army is situated to-day.

General ELLIOTT. There is a captain to about 66 men.

The CHAIRMAN. If the Army was full up to 100,000?

General ELLIOTT. And they did not increase in war time, they would have a captain for 112 men.

The CHAIRMAN. How many lieutenants do you have?

General ELLIOTT. We have a first lieutenant and a second lieutenant to a company, the same as in the Army.

The CHAIRMAN. Your company consists of how many men?

General ELLIOTT. We have a captain for about 122 men.

The CHAIRMAN. That is more than a company ordinarily?

General ELLIOTT. Yes, sir; we have not the full quota of officers and never have had.

Colonel DENNY. Our companies are about 83 men.

General ELLIOTT. You take on a battle ship and they insist on not having over 60 or 70 men, and we are obliged to put a captain there. Take the barracks here in Washington; there is not a captain there—three first lieutenants and a couple of hundred men. We have not got the force.

The CHAIRMAN. Do you need more line officers or more staff officers?

General ELLIOTT. We need both equally—11 staff, 30 line.

The CHAIRMAN. Do you mean to say the line officers would go into the staff?

General ELLIOTT. A great many of them would.

Colonel DENNY. It is the only way they can get into the staff, by transfer from the line.

The CHAIRMAN. Are there individuals who prefer to go into the staff?

General ELLIOTT. Yes, sir; they like it.

The CHAIRMAN. Shore duty?

General ELLIOTT. They go with the troops to the Philippines.

The CHAIRMAN. Why should they prefer this duty?

General ELLIOTT. Some men prefer that duty. They like buildings, looking after clothing, etc. It is a promotion in a certain way, and then they do not have the night duty. There are a great many other things. Some prefer that duty to commanding men.

Colonel GOODLOE. There are men not physically constituted to enjoy life on the ocean. Some of them are subject to seasickness.

Colonel DENNY. I think the broader reason is that some men are business men and some military men. The military men serve with the troops and the business men in the staff. The staff has to do with the business and not so much the military.

The CHAIRMAN. Are they reducing the number of marines on the ships?

General ELLIOTT. No, sir.

The CHAIRMAN. Do you feel as though you really needed the additional staff officers?

General ELLIOTT. Yes. It gives promotion to the line and prevents the staff from drawing on the line to perform those duties.

The CHAIRMAN. Irrespective of promotion, the question is whether you need them.

General ELLIOTT. We do need them.

Colonel DENNY. It seems to me, in addition to what the General has said in relation to promotions, and more important than that, is the matter of efficiency, and solely I would put it on that ground, but incidentally and in addition comes the question of promotion. The experience of four or five years has shown, since the passage of the personnel act, that by having regular officers in the Pay Department, the Adjutant-Inspector's Department, and the Quartermaster's Department, more especially in the Pay and Quartermaster's Department, there has been a considerable economy in the expenditure of money, for the reason that you have experienced men first to advertise for bids and then to open bids and to make agreements and contracts, to inspect buildings under agreements and contracts, and generally to look out for stores, supplies, and equipments. The whole effect is greater efficiency in administration, also economy in expenditures. The same rule applies to the military which holds in civil life; that is, that when special work is to be done an expert therein is selected to do the work, not a man who is inexperienced and more or less inefficient.

Officers in my department to be valuable must be men not only of high character and physically sound for field service, but be specially

trained to procure, preserve, and issue all material used by the corps, such as public buildings, clothing, rations, arms, ammunition, transportation, forage, fuel, etc. They disburse the money provided by Congress for the corps, except that for pay.

To-day we only have 12 regular quartermasters and 8 or 9 acting quartermasters. The latter are detailed from the line. The result is a hardship for the line and less efficiency for the staff.

General ELLIOTT. Then he is easily checked because he is bonded.

Colonel DENNY. If he should make a mistake and any expenditure was contrary to law and not in conformity with the rules of the accounting officers of the Treasury, he is pecuniarily responsible. He gives a bond, and if he fails to make good, his bondsmen must. The line officers who are temporarily detailed to this duty are not required to give bond.

The CHAIRMAN. I understand, in the first place, that your organization is a military organization, and assimilated to the Army?

General ELLIOTT. Yes, sir.

The CHAIRMAN. That is, it is really a sailor and soldier organization, so to speak?

General ELLIOTT. Yes, sir.

The CHAIRMAN. I wish you would put in the hearing a comparative statement of the Army and Marine Corps.

General ELLIOTT. There is one other thing. We need these men for the reason that by July 1, 1908, the Navy will be increased by 15 large vessels, and we need these men now to prepare them, enlist them, so they shall be ready for duty with the new vessels. We can not get them offhand. It is hard work recruiting, especially when the times are so flush, and it will take 900 men to equip those 15 ships.

The CHAIRMAN. Now, passing on to the next item, "Pay of officers, prescribed by law, on the retired list," \$115,000. That is the same as last year. You figure that all out in accordance with the number and rank of those on the retired list?

Colonel GOODLOE. Yes, sir.

The CHAIRMAN. The next item is "For pay of noncommissioned officers," etc., \$1,883,555.20. That is the same as last year?

Colonel GOODLOE. Yes, sir.

The CHAIRMAN. Then there is the language—

Provided, That hereafter privates regularly detailed and serving as cooks, shall receive, in addition to the pay otherwise allowed by law, the following: First-class cooks, thirty-two dollars per month; second-class cooks, twenty-two dollars; third-class cooks, seventeen dollars; and fourth-class cooks, twelve dollars.

Please explain the necessity of that.

General ELLIOTT. In the old days we used to get cooks that had been to sea a good deal and knew how to cook. The class of men coming in to-day we can not find among them a man who knows how to cook who will do the work for the private's pay. We have the ration issued, but unless it is cooked well, why the men become dissatisfied.

The CHAIRMAN. What do you have, the army or the navy ration?

General ELLIOTT. The army ration. These cooks are up every morning by 3 o'clock and they work until after supper in the evening.

The CHAIRMAN. What does a first-class cook get?

General ELLIOTT. A private's pay.

The CHAIRMAN. What does that amount to?

General ELLIOTT. Thirteen dollars. If he is an old man he may get \$15 or \$16.

The CHAIRMAN. Take a man who would go upon the list as a first-class cook, what would he get? I suppose some of your men would become first-class cooks under this provision?

General ELLIOTT. We give them no rank, but wish to give them more pay for hard work.

The CHAIRMAN. What do they get now, the highest paid cook in the service?

General ELLIOTT. They get the regular pay and then they get \$10 a month. That is made up to them.

The CHAIRMAN. That is \$23?

General ELLIOTT. Yes, sir.

The CHAIRMAN. What does the second-class cook get?

General ELLIOTT. The pay will not average over \$15.

The CHAIRMAN. What they get is \$13?

General ELLIOTT. Yes, sir; if they have been four years in the service they get \$15 during the fourth year.

The CHAIRMAN. Would they not get a regular increase on reenlistment?

General ELLIOTT. Yes, sir.

The CHAIRMAN. How much would that amount to?

General ELLIOTT. After serving two years they get \$1. They get \$15 at the end of the enlistment. They begin a second enlistment on \$16, and the second year after reenlistment they get \$18, and it can run up to \$21. That is the highest pay.

The CHAIRMAN. What do the army cooks get?

General ELLIOTT. By special acts of Congress dated July 7, 1898, and March 2, 1899, the Secretary of War is authorized and directed to cause to be enlisted in each company two cooks, who shall have the pay and allowances of sergeants of infantry (that is, \$18 a month during the first two years of enlistment, with the usual increase for continuous service). The Army Regulations provide for the payment of 25 cents a day to cooks in addition to the above.

These acts do not apply to the Marine Corps, because they do not come under the law establishing the pay of the Army, they having been enacted to enable the Secretary of War to meet special requirements.

When 4 army companies, or about 260 men (the strength of an army company being about 65 men), are assembled at a post, they are allowed 2 cooks to each company, or a total of 8 cooks to 260 men. The pay of a cook in the Army being about \$25 a month, the cost of 8 cooks for 260 men is about \$200 a month. In the Marine Corps there are only 4 cooks to a post with a strength of 400 men. If the strength of a post is less than 400 men, the number of cooks is less. Hence the pay of cooks for 400 men in the Marine Corps would be but \$135 a month, whereas the pay of cooks for 260 men in the Army is \$200 a month.

It is not desired to give the proposed cooks in the Marine Corps any rank, but merely to give them such extra compensation, in addition to their regular pay as privates, as will be commensurate with the work which they are required to perform.

The Marine Corps ration, if properly cooked by experienced men, is palatable and sufficient. At present there is considerable waste, which is due to inexperienced cooks, and this waste it is hoped to prevent by giving them extra compensation. We ask Congress for no extra appropriation to pay our cooks, provided, as requested, the amounts paid to them in addition to their regular pay as privates may be deducted from the appropriation "Provisions, Marine Corps." These amounts we can save by employing trained men as cooks.

[NOTE.—Answering the question of the chairman of the committee, "What do the army cooks get?" General Elliott stated before the committee that they did not get any specified pay, but that, in effect, they were on the same basis as the cooks in the Marine Corps. Since receiving this statement for correction it develops that army cooks are paid as above stated.]

The CHAIRMAN. There is no appropriation provided here for these cooks?

General ELLIOTT. We have money enough. We could pay it out of the rations. We save enough and turn in enough money every year to pay the cooks.

Mr. KITCHIN. I notice that you put down the fourth-class cooks at \$12. Do any of your cooks receive as little as \$12 now?

General ELLIOTT. This is an increase. They get the regular pay of a soldier now. If a man is on his first enlistment he gets \$13, and we have asked to give him \$12 additional.

Mr. KITCHIN. This \$32, \$22, \$17, and \$12 is additional to their pay?

General ELLIOTT. Yes, sir. They are the hardest worked men in the service.

The CHAIRMAN. The next item is—

For the pay as prescribed by law for the following additional men here authorized: Two sergeants-major, twenty-five quartermaster-sergeants, thirty-nine gunnery-sergeants, ninety-four sergeants, one hundred and sixty-nine corporals, twenty-five drummers, twenty-five trumpeters, and one thousand six hundred and thirty-three privates, three hundred and forty thousand six hundred and sixty-eight dollars.

What is the necessity for these additional officers and men?

General ELLIOTT. We are unable to do the work required of us now, and when the 15 new ships come out we will send 900 or 1,000 marines on board those ships. Our men are doing day on and day off and not filling all the posts required. At present we have only 26 marines at Annapolis.

The CHAIRMAN. Will you kindly furnish a statement showing where the men are at the present time?

General ELLIOTT. Yes, sir.

The CHAIRMAN. And how many there are on board the ships and on what ships they are?

General ELLIOTT. Yes, sir.

The CHAIRMAN. The next item is "Pay and allowance of retired enlisted men," \$67,422. I suppose that has been figured out?

Colonel GOODLOE. Yes, sir.

The CHAIRMAN. The next item is "Undrawn clothing: For payment to discharged soldiers for clothing undrawn," \$93,569.98. There is an increase of about \$16,000. Why is that necessary?

Colonel GOODLOE. It amounts to fully that much, and of course this is an appropriation in which if the number of men discharged

with the clothing allowance does not amount to that amount, of course that money is not paid out, but the large number of discharges necessitates an increase for the clothing allowance, and that really is a very low estimate to pay men for clothing upon discharge from the service.

Colonel DENNY. If the clothing is not issued to them and the money is, we have the clothing on hand. So it is as broad as it is long. They either get the money or the clothing.

The CHAIRMAN. They are entitled to how much—each man?

Colonel DENNY. About \$67 a year.

The CHAIRMAN. Equivalent to how many suits?

Colonel DENNY. It is divided up. A fixed number of garments per man per year. The allowance is prescribed annually in an order issued by the Secretary of the Navy.

The CHAIRMAN. The next item is, "Mileage: For mileage to officers traveling under orders without troops, \$40,000." That is an increase of \$10,000. You get army mileage?

General ELLIOTT. Yes, sir.

The CHAIRMAN. Seven cents?

General ELLIOTT. Eight cents.

Colonel DENNY. We get the navy mileage, 8 cents, by law.

The CHAIRMAN. You have to look out for your own baggage?

General ELLIOTT. Yes, sir.

The CHAIRMAN. The army mileage is 7 cents, with additional for baggage?

Colonel DENNY. Yes, sir.

The CHAIRMAN. Is it practically the same thing?

Colonel DENNY. Yes, sir.

The CHAIRMAN. Some of the army people claim that you get the best of it.

Colonel DENNY. I do not think so. They used to get 4 cents a mile and now they get 7 cents and the transportation of baggage.

Colonel GOODLOE. That was brought about some time ago, when the officers were traveling in the Indian country.

The CHAIRMAN. What I want to get at is whether the transportation amounts to any more than 1 cent a mile?

Colonel DENNY. A captain would be allowed about 1,800 pounds of baggage. If you transport that from New York to San Francisco you can see what that would be, and in an emergency it would be sent by express.

The CHAIRMAN. What is allowed a private?

Colonel DENNY. He takes his on his back. A private gets only his actual transportation.

The CHAIRMAN. You think it amounts to the same?

Colonel DENNY. I think the Army has a little the better of it.

General ELLIOTT. They have to go through some business transaction, which is annoying, because they have the bonded roads. That gives them a good deal of trouble. We have nothing to do with the bonded roads.

Mr. KITCHIN. There is an increase of \$10,000 I notice in this item of mileage to officers. Was there any deficiency in that item last year? I suppose there was no deficiency, but was it sufficient?

Colonel GOODLOE. The \$30,000 was exceeded.

General ELLIOTT. There is another thing. We have to go West

recruiting a good deal for our men, and it keeps us running mighty close to make both ends meet. The Comptroller has decided that if a man enters the service as a second lieutenant he shall be given mileage from his home to the station to which ordered. They did not do that formerly. That would be the mileage of forty-one officers from their homes to their first station.

The CHAIRMAN. Is the main reason for asking for this increase due to the expectation of increasing the number of officers?

General ELLIOTT. No; that is but one item—a new one.

The CHAIRMAN. Would you get these additional officers from the Naval Academy?

General ELLIOTT. No, sir; they come from civil life. The Naval Academy could not furnish them. They have hard work to furnish their own.

The CHAIRMAN. Do they come from the ranks?

General ELLIOTT. We have been very fair, and we have 22 officers from the ranks. Some of the best duty officers we have are from the ranks.

The CHAIRMAN. The next item is—

For commutation of quarters of officers on duty without troops where there are no public quarters, twenty thousand dollars.

There is an increase of \$5,000.

Colonel GOODLOE. That increase has been necessitated by the fact that so many officers are going on duty of recruiting. That has increased it. Of course they must have provision made for them while they are on this duty in different portions of the United States. Of course where they are serving with troops it is commutation of quarters. If an officer serves with troops and there are no quarters then he receives the hire of quarters.

The CHAIRMAN. Is that so in the Army?

Colonel DENNY. It is the Army law.

The CHAIRMAN. There was a question that came up in regard to the naval bill, and the Senate put on a provision giving to naval officers commutation of quarters where they were serving without troops. I think the words "without troops" were used.

Colonel GOODLOE. It is just the same as the Marine Corps.

The CHAIRMAN. And the chairman of the Committee on Military Affairs, Mr. Hull, said that if they got that they would get something that the Army was not getting.

Colonel DENNY. I remember that discussion very well.

The CHAIRMAN. And I want to know just what the fact is.

Colonel GOODLOE. We got it from the Army. That is the army law and regulation. Then the Navy gets that from the Marine Corps.

Colonel DENNY. The fact is that if an officer is serving with troops where there are no public quarters under the law he gets an allowance for hire of quarters. In other words, the Quartermaster's Department actually hires quarters for him and pays for the hire and the officer lives in those outside quarters. If he is serving at places such as the Navy Department, the War Department, or the headquarters of the Marine Corps, where there are no troops, he gets commutation of quarters at \$12 per month per room. Officers of various grades are allowed so many rooms per month, and that number multiplied by \$12 shows the amount he gets for commutation of quarters.

The CHAIRMAN. The next item is "Pay of civil force: In the office of the Brigadier-General Commandant," and you are asking for the increase of the salary of the chief clerk from \$1,600 to \$1,700. Is that an old clerk?

Colonel GOODLOE. Yes, sir. The Secretary increased his pay \$100.

General ELLIOTT. This clerk has been in the service ten years and is under 36 years of age.

The CHAIRMAN. The next item is the office of the assistant paymaster, San Francisco, Cal.

Colonel GOODLOE. There is one clerk there.

The CHAIRMAN. You want the words "San Francisco, California," to be inserted in that paragraph?

Colonel GOODLOE. I have never seen the necessity of that.

General ELLIOTT. It makes it so that we never can change the clerks. It is a good thing sometimes to change them. We have a man in the Philippine Islands who has been serving five years and we can not get him away.

The CHAIRMAN. In the office of the assistant paymaster, Washington, D. C., you are asking for one clerk at \$1,300. Have you not any clerk here?

Colonel GOODLOE. No, sir. The assistant paymaster has not had a clerk since he has been here.

General ELLIOTT. He has been doing all his own work, and besides has a lot of money that he is responsible for, and I think he should have a clerk—some man he can trust.

The CHAIRMAN. Who does the work now—an enlisted man detailed?

General ELLIOTT. Yes, sir. Lieutenant-Colonel Richards works hard.

Mr. KITCHIN. Is it contemplated to keep that man here and put him up to \$1,300 or to get some other man for that place?

General ELLIOTT. They will probably get some civil-service clerk.

Mr. KITCHIN. Is there no way of making this man who is now performing the duties the clerk?

Colonel DENNY. No, sir.

Mr. KITCHIN. It looks to me, if we are going to authorize the pay, the present man should have it.

Colonel GOODLOE. In a case of that kind it would be necessary for an enlisted man to be discharged and after qualifying under the civil-service law to be appointed just as any other person.

General ELLIOTT. If Lieutenant-Colonel Richards wants this man he will try to get it done by the Secretary.

The CHAIRMAN. In the office of the adjutant and inspector you are asking for the increase of the salary of the chief clerk from \$1,600 to \$1,700, and in the office of the quartermaster the same.

Colonel GOODLOE. Yes, sir; that is just the same as the other—just a hundred-dollar increase.

The CHAIRMAN. There is no other change until we get down to the item—

For interest on soldiers' deposits, four thousand dollars, and so much as may be necessary to refund such deposits: and the money herein specifically appropriated for the pay of the Marine Corps shall be disbursed and accounted for in accordance with existing law as pay of the Marine Corps, and for that purpose shall constitute one fund.

How many deposits have you under the law passed last year?

Colonel GOODLOE. There are no deposits at all as yet.

The CHAIRMAN. What interest do you pay, 3 per cent?

Colonel GOODLOE. Four per cent. Just as soon as the stationery blanks and everything of that sort are furnished by the Public Printer these deposits will be received and accounts will be opened, but of course all that matter has to go through the Department and the Comptroller, and up to this time nothing has come back to me for the purpose of commencing and opening this banking system, to enable the enlisted men to make deposits and receive interest. We expect to do that very soon, but up to this time no action whatever has been taken, because we got nothing from the Department to authorize the printing.

The CHAIRMAN. Is this law the same as the army law?

General ELLIOTT. Just exactly.

Colonel GOODLOE. We framed it from both the army and navy laws.

General ELLIOTT. If they had put "the Marine Corps" in the law it would have been the same thing.

The CHAIRMAN. This item says, "For interest on soldiers' deposits." You call your men soldiers?

General ELLIOTT. Yes, sir.

The CHAIRMAN. The next item is, "In all, pay Marine Corps, three million two hundred and sixty-eight thousand nine hundred and eighty-six dollars and forty-six cents." The increase is made up largely by the two items, as I recall?

Colonel GOODLOE. Yes, sir.

The CHAIRMAN. First, the increase in the number of officers of the staff, \$76,000, and then the increase in the privates, \$340,000?

General ELLIOTT. Yes, sir.

Colonel GOODLOE. I presume you will embody that section which makes the whole appropriation one sum, as appears in the estimate?

Colonel DENNY. That is in italics as if it is new law. That is existing law.

The CHAIRMAN. You have it right in the paragraph above, "In all, for pay of civil force."

Colonel GOODLOE. In regard to one other item. Of course, you are familiar with the law that gives the President the right to appoint officers on the retired list one additional grade for war services?

The CHAIRMAN. Yes, sir.

Colonel GOODLOE. There was a number of names sent to the Senate and confirmed, and it is not specially mentioned in any of these estimates of appropriation?

The CHAIRMAN. I understand.

Colonel GOODLOE. I have a list which I would like to submit for your consideration.

The list submitted by Colonel Goodloe follows:

Additional pay for retired officers.

Name.	Former rank.	Present rank.	Increase in pay.
<i>Advance one grade.</i>			
R. L. Meade.....	Colonel.....	Brigadier-general.....	\$750.00
W. S. Muse.....	do.....	do.....	750.00
A. S. Nicholson.....	Major.....	Lieutenant-colonel.....	375.00
E. R. Robinson.....	do.....	do.....	375.00
F. H. Corrie.....	Captain.....	Major.....	735.00
F. D. Webster.....	do.....	do.....	735.00
A. S. Taylor.....	do.....	do.....	735.00
E. R. Miller.....	Second lieutenant.....	First lieutenant.....	105.00
<i>Added to retired list.</i>			4,560.00
J. W. McClaskey.....	First lieutenant.....	First lieutenant.....	721.87
<i>Placed on active duty.</i>			
B. R. Russell.....	Lieutenant-colonel.....	Lieutenant-colonel.....	291.67
F. A. Udell.....	First lieutenant.....	First lieutenant.....	210.00
Total increase.....			5,783.54

The CHAIRMAN. The next item is "Provisions, Marine Corps," and this year you are asking for \$678,503. Last year we appropriated \$548,503. There is an increase of \$130,000. What is the necessity for that?

Colonel DENNY. That is to provide provisions for the proposed increase of 2,012 men in the Marine Corps. If that increase in men is not allowed, no increase in money will be required.

The CHAIRMAN. How much do you figure per man?

Colonel DENNY. It is rather a difficult thing to do, but I can submit a table showing the cost of rations at all stations in the Marine Corps. We do that by dividing by the number of stations, which gives the average cost, and multiplying that by the per capita.

The CHAIRMAN. I wish you would furnish that table.

General ELLIOTT. We feed our men for 20 cents or less a day. There are a few posts where it is higher. That is the reason we want the cooks to properly cook the food, and there should be no loss.

Memorandum of ration contracts, Quartermaster's Department, United States Marine Corps, fiscal year ending June 30, 1907.

Post.	Rate per hundred.	Post.	Rate per hundred.
Portsmouth, N. H.....	\$16.73	San Juan, P. R.....	\$28.75
Boston, Mass.....	15.75	Key West, Fla.....	34.50
Newport, R. I.....	21.00	Pensacola, Fla.....	22.20
Iona Island, N. Y.....	35.50	New Orleans, La.....	22.00
New York, N. Y.....	17.22	Sitka, Alaska.....	34.00
League Island, Pa.....	18.75	Bremerton, Wash.....	19.70
Annapolis, Md.....	21.75	Mare Island, Cal.....	15.15
Washington, D. C.....	17.23	San Francisco, Cal.....	15.35
Navy-yard, Washington, D. C.....	17.23	Honolulu, Hawaii.....	20.13
Norfolk, Va.....	15.85		
Charleston, S. C.....	29.00	Total.....	460.29
Port Royal, S. C.....	22.50	Average cost per 100 rations.....	21.44

The CHAIRMAN. The next item is, "Clothing, Marine Corps: For noncommissioned officers, musicians, and privates authorized by law, \$725,920."

Colonel DENNY. There is an increase proposed of \$160,000.

Mr. KITCHIN. That includes the musicians and privates?

Colonel DENNY. It is all for men. The officers buy their own clothing.

The CHAIRMAN. That increase of appropriation comes from the increase in the number of men?

Colonel DENNY. Yes, sir.

The CHAIRMAN. If you do not have the increase in the number of men, you would not need it?

Colonel DENNY. Not entirely. The sum of \$135,000 is required for the 2,012 men, the basis being about \$67 per man for clothing for a year, and the difference between that and \$160,000, \$25,000, is recommended on account of the increase in the cost of labor and material, which is based upon bids received last July and again in October of this year.

Mr. KITCHIN. What is the rate of increase?

Colonel DENNY. It varies very much, depending upon the character of the material. Cotton, for instance, I should think, from 12 to 15 per cent; wool, from 20 to 25 per cent. It depends upon the character of the material. Leather has increased very greatly. It is used in the shoes. Rubber goods have increased very materially. I can give you a table if you so desire.

Mr. KITCHIN. I wish you would supply that data.

[Colonel Denny furnished the following data:]

Statement of articles of clothing issued to enlisted men of the United States Marine Corps.

Aiguillettes, gold.	Coats:
Blanket, woolen.	Field.
Caps:	Full dress.
Full dress.	Full dress, band.
Full dress, band.	Full dress, second leader of band.
Muskrat.	Full dress, drum major.
Undress.	Full dress, field music.
Undress, band.	Overcoat.
Cover for.	Summer.
Ornament for.	Undress.
Chevrons, field, set:	Drawers:
Sergeant-major.	Heavy.
Quartermaster-sergeant.	Light.
Drum major.	Nainsook.
First sergeant.	Gloves, pair:
Gunnery sergeant.	Cotton.
Sergeant.	Woolen.
Corporal.	Hats:
Chevrons, gold, set:	Field.
Second leader of band.	Figure for.
Drum major.	Letter for.
Chevrons, silk, set:	Ornament for.
Sergeant-major.	Helmet, white:
Quartermaster-sergeant.	Base for.
Drum major.	Spike for.
First sergeant.	Insignia:
Gunnery sergeant.	First-class gun pointer.
Sergeant.	Second-class gun pointer.
Corporal.	Leggings, pair.
Clothing requisition and receipt book.	

Lyres :	Socks :
Gold.	Cotton.
White metal.	Woolen, heavy.
	Woolen, light.
Shirts :	Stripes :
Flannel, olive-drab.	Noncommissioned officer.
Under, cotton.	Service.
Under, heavy.	Suspenders.
Under, light.	Trousers :
Shoes :	Dress, band.
Arctic.	Dress, field music.
Leather, black.	Dress, noncommissioned officer.
Leather, russet.	Dress, private.
Shoulder knots :	Field.
Gold, pair.	Summer.
White, with aiguillettes, pair.	Belt, tan, for.

Table specifying the allowance of clothing to enlisted men of the United States Marine Corps, apportioned to each year of enlistment.

Articles.	Year.					
	First.	Second.	Third.	Fourth.	Fifth.	Total.
Aiguillettes, band	1					1
Blankets, woolen	2					2
Cap, full-dress	1					1
Caps, undress	2	1	1	1	1	6
Cap covers, linen	2	1	1	1	1	6
Cap ornaments	2	1	1	1	1	6
Coat, full-dress	1					1
Coats:						
Undress, lined or unlined	2	1	2	1		6
Summer	2	1		1		4
Field	2	2	1	1	1	7
Chevrons:						
Field, sets	4	3	1	2	1	11
Gold, sets	1					1
Silk, sets	4	1	2	1		8
Drawers:						
Light	2	2	2	2	2	10
Heavy	2	2	2	2	2	10
Gloves, cotton	8	8	8	8	8	40
Hats, field	2	1	1	1	1	6
Hat ornaments	2	1	1	1	1	6
Helmet, white, complete	1					1
Leggins	2	2	2	1	1	8
Letters and figures for field hats, each	2	1	1	1	1	6
Overcoat	1					1
Shirts:						
Flannel	2	2	2	2	2	10
Under, light	2	2	2	2	2	10
Under, heavy	2	2	2	2	2	10
Shoes, black or russet leather	3	3	3	3	3	15
Shoulder knots, pair	1					1
Socks:						
Cotton, pairs, light or heavy	4	4	4	4	4	20
Woolen, pairs, light or heavy	4	4	4	4	4	20
Suspenders	1	1	1	1	1	5
Trousers:						
Dress, band	1		1		1	3
Dress, noncommissioned officer	2	2	1	1	1	7
Dress, field music	2	2	1	1	1	7
Dress, privates	2	2	1	1	1	7
Summer	3	1	1	1	1	7
Field	2	2	1	1	1	7

The allowances for men enlisted for four years are those stated in columns first, second, third, and fourth in the above table.

Comparative statement showing unit price of material used in clothing enlisted men of the Marine Corps.

Material.	Fiscal year 1906.	Fiscal year 1907.
Kersey, sky blue.....per yard..	\$1.82	\$1.81½
Coat cloth, dark blue.....do....	1.95	1.94½
Scarlet cloth.....do....	2.62	2.59½
Scarlet flannel.....do....	.84	.87
Jacket flannel, dark blue.....do....	1.16	1.22
Shirting flannel.....do....	.92	1.11
White linen, grass bleached.....do....	.40½	.4445
White wadding.....per dozen sheets..	.3397	.3397
Cotton drilling, unbleached.....per yard..	.0661	.0748
Muslin, unbleached.....do....	.05	.0519
Drab lining jeans.....do....	.06625	.0693
Black padding.....do....	.0748	.0784
Black silesia.....do....	.0837	.0874
Black Italian cloth.....do....	.3563	.355
Stiff canvas.....do....	.12	.1245
Light canvas.....do....	.1073	.1278
Tape, khaki color.....do....	.0045	.006
Khaki suiting.....do....	.225	.24
Yellow silk lace.....do....	.105	.1025
Pieces leather, black pebble-grain morocco.....per dozen..	.20	.24
Hooks and eyes, large, for overcoat.....per gross..	.36	.32
Hooks and eyes, small.....do....	.135	.2075
Button, gilt, coat:		
Large, 35-ligne.....do....	2.60	2.60
Medium, 30-ligne.....do....	2.25	2.25
Small, 25-ligne.....do....	1.40	1.40
Button, bronze, coat:		
Large, 30-ligne.....do....		2.25
Small, 25-ligne.....do....		1.40
Button, trouser, anchor:		
Large.....do....	.3221	.2995
Small.....do....	2.85	.2824
Button, white bone, A:		
27-ligne.....do....	.125	.14
22-ligne.....do....	.115	.125
Button, brass:		
Suspender.....do....	.056	.0624
Fly.....do....	.0515	.054
Button, shirt, olive-drab.....do....	.28875	.31
Button rings.....do....	.0513	.05
Trouser buckles.....do....	.78	.78
Sewing silk (750-yard spools).....do....	46.70	49.16
Buttonhole twist (10-yard quills).....do....	1.90	1.95
Basting cotton (200-yard spools).....do....	1.59	1.99
Trouser clasps, brass.....do....	.31	.30½
Linen thread:		
No. 35.....per pound..	1.14	1.14
1-ounce, No. 70.....per gross..	19.35	19.35
Sewing cotton:		
Nos. 30 and 40, 200-yard spools.....do....	3.90	4.54
No. 60, 200-yard spools.....do....		4.54
Woolen blankets.....each.....	3.97	4.28
Rubber boots.....per pair..	2.28	2.19
Rubber coats.....each.....	3.35	3.45
Rubber ponchos.....do....	2.79	
Rubber hats.....do....	.264	.28½
Shoulder knots.....per pair..		2.04
Undress caps.....each.....	.87	.835
Undress caps for band.....do....	.98	.96
Full dress caps.....do....	1.42	
Full dress caps for band.....do....	1.75	
Muskrat caps.....do....	1.43	1.88
White cap covers.....do....	.1187	.124
Gunnery sergeant's field chevrons.....per set..	.93	.89
Sergeant's field chevrons.....do....	.20	.18
Corporal's field chevrons.....do....	.1598	.14
Sergeant-major's field chevrons.....do....	.35	
Quartermaster-sergeant's field chevrons.....do....	.32	
First sergeant's field chevrons.....do....	.2898	
Cap ornaments.....each.....	.07½	.08125
Leggins.....per pair..	.389	.4349
Woolen socks.....per dozen pairs..	4.11	
Cotton socks:		
Heavy weight.....do....	1.09	1.12
Light weight.....do....	.98	
Woolen gloves.....do....	7.46	5.50
White cotton gloves.....do....	1.41	1.65
Field hats.....each.....	1.40	1.59
Drawers, heavy-weight.....do....	1.45	1.65
Undershirts, heavy-weight.....do....	1.45	1.65
Drawers, light-weight.....do....	.90	1.05
Undershirts, light-weight.....do....	.90	1.05

Comparative statement showing unit price of material used in clothing enlisted men of the Marine Corps—Continued.

Material.	Fiscal year 1906.	Fiscal year 1907.
White helmets.....each..	\$1.48	\$1.48
Brass spikes for helmets.....do..	.18	.18
Brass bases with stars for helmets.....do..	.18	.18
Russet calf-skin shoes.....per pair..	2.14	2.88
Black calf-skin shoes.....do..	2.14	2.865
Arctic shoes.....do..	1.92	2.46
Suspenders.....do..	.1617	.1644
Trouser belts.....each..	.34	.49
Waist belts.....do..		.85
Cotton tape.....per yard..		.0046
White cloth.....do..	3.00	
White lining jeans (bleached).....do..	.0659	
Black mohair tubular braid.....do..	.079	
Yellow worsted lace.....do..	.25	
Lyres.....per pair..	.35	
Nainsook.....per yard..	.0853	.1598

The CHAIRMAN. The next item is "Fuel, Marine Corps," and you are asking for \$90,000 instead of \$70,000. There is an increase of \$20,000.

Colonel DENNY. The increase there is based chiefly on the increase in the number of posts to be looked out for under this head. For example, the new barracks at New Orleans, at Norfolk, at the training station at San Francisco, and at Olongapo will be completed before the end of this fiscal year. So that during the next fiscal year an additional supply of fuel for those four posts will be necessary. In addition to that, part of the station at New London has been transferred to the Marine Corps, and under the authorization of Congress we are improving the buildings there for enlisted men, and we are asking in our estimate for the next year further appropriation from Congress for additional buildings. So that station, added to the other four stations, will require for maintenance for the enlisted men \$20,000 under the head of "Fuel."

The CHAIRMAN. What are you doing at New London, training the men and officers?

Colonel DENNY. Yes, sir.

General ELLIOTT. We are putting some student officers there. The student officers in Annapolis are living in establishments divided off by a canvas, from six to ten in a room—no privacy—living more like enlisted men than officers.

The CHAIRMAN. How many men have you there now?

Colonel DENNY. The building is not done, and will not be done until early spring, so we are not keeping any force there at present.

In relation to this increase of \$20,000 for fuel, \$10,000 is proposed for the additional men we are asking for.

The CHAIRMAN. Under the item "Military stores, Marine Corps," you increase the pay of the chief armorer from \$3 to \$4.50 per day?

Colonel DENNY. Yes, sir; we had that subject before you last year. Those who are affected by this proposed increase are the men who have served with us a long while and are most efficient and faithful, and they are getting pay now that is much below the pay they would get outside, and we believe that they ought to have at least \$1 increase in pay per day. They are hard-working men; efficient men and faithful men.

The CHAIRMAN. Then there is an increase in military stores of \$75,000. Why is that necessary? How much of that amount is for the increase in the number of men?

Colonel DENNY. About \$50,000 is for additional arms, ammunition, and various supplies purchased under the head of "Military stores." With the balance it is proposed, among other things, based upon practical experience, to purchase strips of land for target ranges. We now rent target ranges, and the leases in such cases are often broken by the owner of the property wanting the land for sale.

The CHAIRMAN. Do you own any rifle ranges now?

Colonel DENNY. None, except at the regular naval stations—for instance, at Philadelphia and Olongapo—and wherever the station is of sufficient size to permit firing to be carried on with safety; but we lease ranges at New York and in the East, and also in the South.

The CHAIRMAN. How much do you have to pay a year?

Colonel DENNY. It depends very much on its nearness to cities. In the most remote places, such as at Norfolk, where it is several hours from the station—the men have to go down in boats—the rent is comparatively low; less than \$500 a year. If it is near a city the rent is very much higher, of course. It is more a question of tenure. There is no stability about it now. We may go to the extent of improving a range, putting targets there and some place for the markers and other fittings for the comfort of the men, and the next year the owner may decide to sell or refuse to renew the lease and we have lost all those improvements.

The CHAIRMAN. Have you any place in mind that you would like to buy?

Colonel DENNY. Yes, sir. There are a number of excellent places below Norfolk, down on the river, some inland. This is true at practically all our stations.

The CHAIRMAN. How many ranges could you buy for this \$25,000?

Colonel DENNY. The idea would be to buy two a year, and in the course of six or eight years we would have enough. The idea is not to ask Congress for much each year, but gradually to get them.

Mr. KITCHIN. Can you tell us about how much the renting of these rifle ranges cost last year?

Colonel DENNY. Not offhand; but I can give you a statement showing exactly what it did cost.

The CHAIRMAN. And showing where they were located?

Colonel DENNY. Yes, sir.

General ELLIOTT. The law passed Congress last year allowing a marksman \$1 more a month; if he becomes a sharpshooter he gets \$2 more a month, and if he becomes an expert rifleman—and only a very few reach that stage, he gets \$3 a month. These men are urging that they be allowed an opportunity to go to the rifle range. As it is now, there are a great many of them that we can not send to the rifle range—the real range. We have little auxiliary ranges built in sheds, where we shoot the reduced charge and train the men in that way, and while it is a great assistance and the men do tolerably well on the ranges, they have no opportunity to get this extra dollar. The men want these ranges themselves in order that they may be put on the same footing with the soldiers in the Army, so that they can get this pay. As soon as they can qualify they get the money.

Colonel DENNY. As I told you, the proposition is to buy a few ranges, one or two each year. Another reason for this increase of \$25,000 is the increased field service. Our marines are being ordered all the time. For instance, there is a floating battalion maintained, by the direction of the Secretary of the Navy, especially in the West Indies, and also a regiment in Cuba—over a thousand men. The number of men in the Philippines has increased from about 900 to 1,200 men, and the additional cost of supplying ammunition and field equipment for these men, serving as I have said, enters into this increase, and the cost of the rifle ranges plus the cost of these military supplies required by these men so serving makes just about \$25,000. I omitted to state that the command at Peking has been increased, and therefore the quantity of military supplies kept at that remote station is much greater than it used to be.

Mr. KITCHIN. I wish you would put in your testimony a statement of the condition at Peking—how many men you have there.

General ELLIOTT. One hundred and twenty-five men and five officers. We have to ship everything to them by mail steamer.

The CHAIRMAN. They are right at the legation?

General ELLIOTT. Yes, sir; in the barracks there.

Mr. KITCHIN. You supply them from here?

General ELLIOTT. Yes, sir. We do not know when they will call for an increase; they might do so at any time.

The CHAIRMAN. For "Transportation and recruiting" there is an increase of \$80,000.

Colonel DENNY. Fifty thousand dollars of which is to provide transportation and recruiting for the proposed enlargement of the corps as previously referred to. The balance of the proposed increase, that is, \$30,000, is asked for because of very serious trouble and material increase in the expense of recruiting. We have recruiting officers now practically all over the country, in the East, Middle West, Far West, Northwest, and South; in Mississippi, Tennessee, North Carolina, Arkansas; in the West, Iowa, and in the Northwest, the Dakotas.

General ELLIOTT. And in St. Louis, Chicago, and Detroit.

Colonel DENNY. Practically all over the country, and that is made necessary because of the great trouble we have in getting recruits. The prosperity of the country makes it very difficult to get men. They seem to be able to get work in all kinds of labor centers and on farms.

The CHAIRMAN. You send out recruiting parties?

Colonel DENNY. Yes, sir. We send out traveling parties that go from place to place and we have permanently established offices at desirable places.

General ELLIOTT. St. Louis, Chicago, and St. Paul.

Mr. KITCHIN. How many recruits did you have during the last year?

General ELLIOTT. We had double discharges last year. We recruited nearly 5,000 men.

Mr. KITCHIN. How many of them were new men? I suppose many were reenlistments.

General ELLIOTT. We had 46 per cent reenlistments. No other corps in the service, Army or Navy, has as many reenlistments as we

have. Our discharges read "Bad," "Good," "Very good," and "Excellent." We do not allow a man to reenlist unless he has a "Good," "Very good," or "Excellent" discharge. Last year 46 per cent of those men receiving discharges reenlisted. In time—in a few years—that is going to give us a better corps and stop desertion. Desertion is the most expensive thing we have. Every time a man deserts we lose \$120.

Mr. KITCHIN. So you had about 5,000 new enlistments?

General ELLIOTT. Yes, sir; but we had double discharges.

Mr. KITCHIN. What percentage of desertions did you have last year?

General ELLIOTT. It will run up to 13 or 14 per cent—that is, the new men. A great many of them become dissatisfied with the service and break their oaths and desert, and the trouble is that it is often condoned at home. People know that a man has deserted, and they do not point their finger at him and say, "You are a deserter," but condone it entirely. That is the trouble. If we could educate our people so that when a man had taken an oath and broken it the people at home would say, "You are a deserter," we would have very little desertion.

Mr. KITCHIN. Is it not a fact that frequently they justify it, not in our minds, but to themselves, by saying that there was some misunderstanding or misrepresentation at the time of the enlistment?

General ELLIOTT. They say so, but I do not believe it.

The CHAIRMAN. At what age do you enlist?

General ELLIOTT. We could enlist, under the law, at 18 years of age, but I will not allow them to take a man under any circumstances under 21 years of age.

The CHAIRMAN. Do you make him furnish evidence that he is 21 years of age?

General ELLIOTT. No, sir. I have written a letter to all the officers saying that if they do not believe a man's statement and believe him to be under 21 years of age, that then they should make him furnish testimony, either by some one who looks like a reliable person or by letter that he is 21 years of age, but in spite of all that we have a few boys whose parents write us that they are under 21 years of age.

The CHAIRMAN. Under the item "Repairs of barracks, Marine Corps," you are asking for an increase of \$12,500. What is the necessity for that increase?

Colonel DENNY. An increase of \$12,500 is recommended. Ten thousand dollars is necessary for the numerous repairs and for the improvements at stations of the corps such as Boston, Mass.; Newport, R. I.; San Juan, P. R.; Sitka, Alaska; Cavite, and some at Olongapo, where we have old buildings upon which we have not for years placed any material repairs or improvements, and these buildings are requiring attention in that direction, some of them to a very considerable extent, and while the expense in no case is very great, the number of stations multiplied by the small amount to be expended on each would amount to, we find from surveys and reports from officers, the sum recommended in the way of an increase.

The CHAIRMAN. The next item is:

Forage, Marine Corps: For forage in kind for horses of the Quartermaster's Department and the authorized number of officers' horses, seventeen thousand seven hundred dollars.

That is the same as last year?

Colonel DENNY. Yes, sir; we have not increased the number of horses?

The CHAIRMAN. How many horses have you?

Colonel DENNY. I would have to look up the report of public property.

General ELLIOTT. We have 12 in California. We have a lot of horses in Norfolk at the rifle range. The people drive to Williamsburg for supplies. All field officers, if they own horses, are entitled to forage to feed them. At Culebra and San Juan we have a few horses for hauling, and we have a few horses here and there.

Colonel DENNY. The Philippines is the greatest place, because there we are dependent upon land transportation, except going from Cavite to Manila.

The CHAIRMAN. You are entitled to a horse?

General ELLIOTT. Yes, sir.

The CHAIRMAN. That means major and up?

Colonel DENNY. Yes, sir; and all staff officers.

The CHAIRMAN. For "Hire of quarters, Marine Corps," you are asking an increase of about \$16,000?

Colonel DENNY. Fifteen thousand eight hundred dollars, \$10,800 of which is necessary to provide hire of quarters for increase in the line officers directed by the commandant of the corps, and for which estimates have been put in—15 captains and 15 first lieutenants.

The CHAIRMAN. We have been over that?

Colonel DENNY. Yes, sir.

Mr. KITCHIN. There is inserted in this paragraph as a new item the office of the brigade commander in the Philippine Islands. How is he provided for now?

Colonel DENNY. If you will just read that language, omitting the letters in italics, it shows that noncommissioned officers and enlisted men who may be detailed for extra duty at the places mentioned, the offices of the commandant, adjutant and inspector, paymaster and quartermaster, and the staff officers at Philadelphia and in San Francisco, for instance, men detailed on this duty are entitled to the hire of quarters—that is, commutation therefor—if on duty at those places, but if on duty in the Philippines in the office of the brigade commander or the staff officers there he can not get it.

Mr. KITCHIN. As the law is now he gets no commutation at all?

Colonel DENNY. That is the point. The men are on the same footing and should be entitled to the same allowance, and according to the rulings of the accounting officers of the Treasury the omission of the words "Philippine Islands" prevents them from getting it. It must be specifically provided for in the act.

Mr. KITCHIN. With this new provision all these enlisted men will be on the same footing?

Colonel DENNY. The enlisted men, the same as their comrades at other places.

Mr. KITCHIN. This does not provide quarters for officers?

Colonel DENNY. No, sir; just for the enlisted men.

The CHAIRMAN. The next item is—

Contingent, Marine Corps: For freight, tolls, cartage, advertising, etc., three hundred and thirty thousand eight hundred dollars.

There is an increase of \$105,000. What is the necessity for that?

Colonel DENNY. Twenty-five thousand dollars of that is intended for the furnishing and equipment and other preparation for occupancy by the enlisted men of the new barracks, which have been completed under the authority of Congress at Norfolk, New Orleans, San Francisco, and Olongapo in the Philippine Islands. These various barracks ought to be completed by the 1st of June next, and the custom for years has been to come to Congress shortly before the buildings are ready for use and ask for funds with which to buy the necessary furniture, bunks, beds, and provide for the water used and for the different things at the barracks, gas, electricity, brooms, rugs, and everything in the way of housekeeping. You remember I have several times referred to that appropriation as the one which relates to the domestic administration of the barracks and provides practically everything.

The CHAIRMAN. If you have all those things one year you do not need to buy them again?

Colonel DENNY. No, sir.

The CHAIRMAN. Could we not reduce the appropriation next year?

Colonel DENNY. This appropriation is for furnishing new buildings which you have authorized.

The CHAIRMAN. I notice that this appropriation increases every year.

Colonel DENNY. Yes, sir.

The CHAIRMAN. You do not increase one year and then go back to the old amount?

Colonel DENNY. We have never asked you for an increase for this particular purpose. We have asked for an increase because of an increase in the number of enlisted men, which means necessarily an increase in the household supplies. There has been a most important increase in the cost of those supplies.

Mr. KITCHIN. How much does that increase amount to?

Colonel DENNY. I went over several things in that statement, but I can give you a statement showing what the increase has been during the year.

Mr. KITCHIN. That leaves \$85,000 unaccounted for?

Colonel DENNY. That would be needed for the proposed increase in the enlisted force—2,012 men.

The CHAIRMAN. We will now take up the items under "Public works," on page 116 of the bill. Last year you had \$106,000, and this year you are asking for \$884,000?

Colonel DENNY. Partly upon the suggestion of this committee last year when we appeared before it that it was not an opportune time then to provide additional public buildings and to submit the estimates to the committee this year and they would probably be favorably considered.

General ELLIOTT. Mr. Chairman, speaking of it as a whole, I can replace every public building, every roof that covers a marine, for \$1,500,000 now, and we have been living for a good many years. We have begged and lived in other people's quarters, army quarters and navy quarters. We have bunked here and there, and you have seen yourself how we are bunked in the Philippines. Upon my word, our men are hardly decently housed. In Guantanamo they are living in a shack constructed of empty 8 and 12 inch shell boxes, which

they have built themselves, and they are rained on and leaked on, and everything else.

The CHAIRMAN. The next item is, "Addition to officers' quarters, marine barracks, navy-yard, Portsmouth, New Hampshire, twelve thousand dollars." How many officers' quarters have you there at the present time?

Colonel DENNY. Two.

The CHAIRMAN. How many men have you there?

Colonel DENNY. We have three officers.

General ELLIOTT. We have three officers and five are required. There are 86 men at the post and there should be 150 men there.

The CHAIRMAN. How many quarters will this \$12,000 give you, one house or two houses?

Colonel DENNY. The idea was to build an addition to the present junior officers' building, which is three stories high, and let each floor consist of a little apartment of three rooms, parlor, dining room, bedroom and bath. That would provide accommodations for three additional young officers.

The CHAIRMAN. The next item is, "Improving parade ground, marine barracks, navy-yard, Boston, Massachusetts, five thousand dollars." Is that right in the navy-yard?

Colonel DENNY. Yes, sir; right in front of the barracks. The parade ground is gravel, and it is mud in winter and dust in summer. It is very bad. It is bad for the health of the command, on account of the dust, the medical officers there have reported. It is bad for the storeroom in which the clothing is kept, and it is most uncomfortable to both officers and the men.

The CHAIRMAN. How would you improve it?

Colonel DENNY. I suppose the best thing would be to put an asphalt or concrete covering over the ground. It is very small and it appears from the estimate we have that that can be done with this sum of money.

The CHAIRMAN. How large is it; is it an acre?

Colonel DENNY. No, sir. I should think it was 270 by 175 feet.

General ELLIOTT. It is not over 150 by 270 feet.

The CHAIRMAN. The next item is—

For construction of marine barracks and officers' quarters, naval station, New London, Connecticut, to cost one hundred thousand dollars, one hundred thousand dollars.

General ELLIOTT. We want to build a school there. I would like to send all the recruits there. The land was allotted to us by the Secretary. From April to November we would put the recruits in camps and buildings instead of putting them in navy-yards or to have them interfere with the other duties. It would be somewhat better to hold them there and drill them in a body and then to distribute them afterwards. Besides I want a building there for the young student officers.

The CHAIRMAN. You have one or two buildings there now?

General ELLIOTT. Yes, sir.

Colonel DENNY. We are adding an additional story to a one-story building now there.

The CHAIRMAN. Is it a brick building?

Colonel DENNY. Yes, sir; we are putting a second story on it. That will accommodate between 60 and 75 men.

The CHAIRMAN. How much of this \$100,000 would go for the barracks and how much for the officers' quarters?

Colonel DENNY. General Elliott's idea is, as I understand it, to have quarters for the student officers in the barracks for the men. In other words, certain portions of the second floor would be partitioned off in small rooms about 12 feet square; not separate buildings. There ought to be, I suppose, one cottage for two quarters in addition to the one frame cottage that is there now. That is for the commanding officer and the instructors. We thought we could build a double house and maybe in that one house comfortably accommodate as many as four officers.

The CHAIRMAN. How many men do you propose keeping there?

General ELLIOTT. About 500 or 600 recruits. Use it as a drill station and then distribute them. It keeps them out of the big cities and keeps them away from New York and Boston.

Mr. KITCHIN. What buildings have you there now?

General ELLIOTT. An abandoned building built by the Navy. It is 182 feet long and 40 feet wide; a single-story building. We are going to put a second story to it, raise the roof, and make that into barracks of small rooms for student officers. There is one house which is given to the commanding officer, and I thought we would want about two or three double cottages, small, and of frame construction, for the instructors.

The CHAIRMAN. There is another old building there——

Colonel DENNY. The roof has fallen in.

The CHAIRMAN. Where they used to store boats.

Colonel DENNY. The Navy has that; they did not transfer it.

The CHAIRMAN. The next item is——

For construction of marine barracks and officers' quarters, navy-yard, League Island, Pennsylvania, to cost one hundred and twenty-five thousand dollars.

What are the present accommodations?

Colonel DENNY. We have one barracks which will accommodate about 200 men.

The CHAIRMAN. How much did that cost?

Colonel DENNY. Exactly \$96,000. The appropriation was \$100,000. That was about six years ago, when the cost of labor and material was about 30 per cent less than now.

The CHAIRMAN. How many men have you at League Island?

Colonel DENNY. From 200 to 220 sometimes.

General ELLIOTT. Yesterday at League Island we had 258 men.

The CHAIRMAN. Why do you need so many men at League Island?

General ELLIOTT. We ship them from there. We draw on League Island for men for sea. Of course our posts vary. If we need men at one post we take them from where we have the greatest number. Before the fleet goes south all vacancies in the fleet will be filled up from League Island and New York. It is a pretty large navy-yard.

Colonel DENNY. It is one of the principal depots of the Marine Corps, where recruits from the central section of Pennsylvania and Delaware and the West—Illinois, Ohio, and other places—go for training and discipline. They sometimes have as many as 350 men when recruiting is active, and that number of men is apt to be greatly discomforted if you have them housed in that building, and it is the only building in which they can be quartered. It is a place where we

have a great deal of ground, and in that respect the best we have, with the possible exception of Norfolk, where the ground we have is even larger.

General ELLIOTT. But that ground will need a lot of work.

The CHAIRMAN. It is healthy at League Island?

Colonel DENNY. Yes, sir. It is near our depot of supplies, and when ships are fitted out the men can be promptly fitted out from the depot, and the cost of transportation is very much less and they can get quickly and economically whatever they require.

The CHAIRMAN. The next item is:

For construction of amusement room for enlisted men, marine barracks, navy-yard, League Island, Pennsylvania, fifteen thousand dollars.

Colonel DENNY. That, Mr. Chairman, we think is highly important to the comfort and contentment of the enlisted men at that station. That station is remote from Philadelphia, 4 or 5 miles, and the idea is to provide a building there with certain features which will attract the men and keep them in garrison where they can amuse and interest themselves rather than to go uptown at considerable expense to themselves and at more or less danger to themselves in the way of getting into trouble, owing to temptations which are thrown in their path in the city.

Mr. KITCHIN. In regard to the quartermaster's depot at Philadelphia, how far is this depot from the marine barracks?

Colonel DENNY. About six miles in a straight line up Broad street.

Mr. KITCHIN. Is that depot the general depot for the entire corps?

Colonel DENNY. Yes, sir; except the Philippines.

General ELLIOTT. They make all the clothing there.

Mr. KITCHIN. You want \$200,000 for additional ground and for the erection of a new building adjoining that depot?

Colonel DENNY. Yes, sir. The present depot, which was completed three years ago under an appropriation from Congress, has been found to be very much too small to hold all of the supplies that we have to buy and to issue. At present we are renting a small building just beyond there—not fireproof; formerly a cheap brick store—and the quartermaster on duty at Philadelphia has reported that it is not secure, and in case of fire would probably be wiped out, which would be most embarrassing, because we would not have an appropriation sufficient to replace supplies so lost. We would have to come to Congress and get an appropriation, and Congress might not be in session at the time, and the result would be very grave. I do not know what we would do. Without supplies and money we would be helpless.

Mr. KITCHIN. What did the building we have there now cost?

Colonel DENNY. It cost \$150,000, which was specifically provided by Congress.

Mr. KITCHIN. The land and building?

Colonel DENNY. Yes, sir; and the language was: "The sum of \$150,000 shall not be exceeded for this purpose."

Mr. KITCHIN. How much did the land cost?

Colonel DENNY. The land cost \$50,000 and the building \$100,000.

The CHAIRMAN. How much land do you want to buy there?

Colonel DENNY. It is 163 feet long and 83 feet wide. It has been offered by the owner at a cost of \$53,000, which disinterested real estate experts and owners in that section have told us was a fair price.

The CHAIRMAN. What do you pay in rent for the additional store at the present time?

Colonel DENNY. I think it is \$4,000 a year.

The CHAIRMAN. What is the value of the goods stored there on an average?

Colonel DENNY. I would have to refer to the property returns. I should think safely \$100,000, probably \$150,000.

The CHAIRMAN. Clothing?

Colonel DENNY. Yes, sir. At present, Mr. Chairman, it is really a very serious embarrassment to us. The depot is piled from the floor to the ceiling on every floor, with little gangways 2 feet wide.

Mr. KITCHIN. What would be the disadvantage of having that depot down on the League Island grounds where we have so much land?

Colonel DENNY. It would involve a material increase in the cost of labor, because labor would have to come there and get the different articles for manufacture, the manufacture of coats, trousers, overcoats, and the general articles of uniform. The practice is for operatives to come in daily to the chief cutters and get the material cut by the cutters and take them out and make them. That would involve going to the navy-yard and coming back, which would mean car fare and the loss of time, which we have not now under this present system. The employment of these operatives is the cheapest in the United States.

Mr. KITCHIN. Suppose we bought the additional land and put a building there; would it not be just a matter of a few years when we would again need more room, and would it not be very important to locate that building somewhere, if it can be done, where we have plenty of land to increase the buildings as the needs of the service increase?

Colonel DENNY. Well, in answer to that, the proposition here contemplates the erection of a building five stories high, with walls of such thickness that if the requirements do increase—that is really a matter for Congress to decide—we can put additional stories on this building up to ten, which would double the capacity of the building. In our most enthusiastic dreams we have not gone beyond that.

Mr. KITCHIN. We have \$150,000 invested there now, and it is proposed to spend \$200,000 more. The property we have there could probably be sold for \$100,000, if it is well located.

Colonel DENNY. I should think that the construction of that building on that site has increased the value of the site, and the building itself, being a very desirable storehouse, I think it is worth \$200,000.

Mr. KITCHIN. The question in my mind was whether it would not be better to get a better location with more land, since it is as certain to grow as any department of this Government, and it seems to me you ought to look out for the future.

Colonel DENNY. If you should locate the manufacturing plant of the Marine Corps at League Island it would be remote from the city, remote from the operatives, remote from the place where we buy supplies, and it would also place the depot in the naval jurisdiction

instead of having it under the Marine Corps jurisdiction as now. It would not be as economical, the work would not be done as expeditiously, and in that connection I want to say that immediately across the street from us is the Pennsylvania freight station, so that in case of requests by letter or telegram, within an hour after their receipt, in an emergency, the material is shipped.

That is the life of the Marine Corps. The unexpected always happens. That is, we get twenty-four hours or thirty-six hours or forty-eight hours' notice to ship a squad or may be a brigade, and with this nearness of the depot to the Pennsylvania freight station, across the street, we can accomplish those things as we have. Our record in that line is remarkable as you, perhaps, know. We can get a brigade off in twenty-four hours if the ship is ready to take us. That is due to the fact that we can get the supplies across the road and in the freight cars and ship them to any place necessary.

General ELLIOTT. There is another thing. Suppose it is inside a navy-yard and your employees are subject to whatever orders the commandant may see fit to give, about what hours they can enter and leave, and whether they shall be searched by the corporal or sergeant of the guard.

Mr. KITCHIN. I can see reasons for its not going into the navy-yard, but it seems to me it could be put a little farther from the business center of the city.

Colonel DENNY. This is remote from the business center. It is on South Broad street on the way to the navy-yard. The only business near it is the manufacturing establishment of Wanamaker, directly across the street. He has a great warehouse where he manufactures a great many things, but it is the only other branch of business in that section of Philadelphia.

Mr. KITCHIN. What is the size of the present lot there?

Colonel DENNY. It is about 80 by 100 feet.

Mr. KITCHIN. This piece of land that you propose to buy will really be larger?

Colonel DENNY. It is 163 feet long by the same width. In that connection, all this ground would not be built upon. It would not be practicable. We must have a yard and some sheds for horses, wagons, and carts. The idea was to have an arch between the two buildings and a place in the rear for the animals and vehicles to go.

The CHAIRMAN. How many stories is the present building?

Colonel DENNY. Five stories.

The CHAIRMAN. Is the construction strong enough to build additional stories?

Colonel DENNY. The walls for the first two stories are 2 feet thick and 18 inches thick above. It is of fireproof construction throughout. There is no plaster on the walls, plain brick walls, with concrete floors, supported by columns of concrete all the way up.

The CHAIRMAN. Could you not add on to the present building?

Colonel DENNY. We could add on to the roof. That, however, was calculated by the architects of the present building and that would not give us the space we actually require.

The CHAIRMAN. The next item is "Toward completion of marine barracks and officers' quarters, Washington, District of Columbia, fifty thousand dollars." How much have we already appropriated?

Colonel DENNY. Two hundred and seventy-five thousand dollars.

The CHAIRMAN. And this \$50,000 would make \$325,000?

Colonel DENNY. That completes the scheme. When we came to you about five years ago the idea was, if you remember the matter, that we should annually come to Congress for certain appropriations to continue the work and not ask for a big sum of money any one year.

The CHAIRMAN. How many officers' quarters have been completed?

Colonel DENNY. None; only buildings for enlisted men have been authorized.

The CHAIRMAN. How many will be completed under this appropriation?

Colonel DENNY. One for the commanding officer and three small apartments for three other officers, a total of four.

The CHAIRMAN. The next item is "For roads, walks, grading, etc., Marine Corps, reservation, navy-yard, Norfolk, Virginia, ten thousand dollars." You have a reservation there, have you?

Colonel DENNY. Yes, sir; the largest in the Marine Corps, about 31 acres.

The CHAIRMAN. Will it take \$10,000 to do this work?

Colonel DENNY. Yes, sir; every cent of it. I am afraid more than that. That is based upon estimates submitted to us by the commanding officer and the civil engineer of the station. There are no roads or walks whatever there. It was an old farm, if you remember, and the furrows are there to-day as they were when the Government bought the property.

The CHAIRMAN. That is down below the navy-yard?

Colonel DENNY. Yes, sir.

The CHAIRMAN. The new tract?

Colonel DENNY. Yes, sir.

The CHAIRMAN. The next is, "For construction of marine barracks and officers' quarters, Charleston, S. C., \$50,000." Have you none there now?

Colonel DENNY. We have a little frame shanty, in which one officer lives, and we have a frame building that we put up three years ago, in which the men live. Both buildings are worth, I should say, about \$6,000. They were when they were built. They are small and frightfully hot in summer. They are simply weatherboards with a shingle roof.

The CHAIRMAN. Have you many marines there now?

Colonel DENNY. No; I think about 50.

General ELLIOTT. We stripped that post for Cuba. There are 34 marines there now.

The CHAIRMAN. The next item is, "For construction of officers' quarters, Navy-Yard, Pensacola, Florida, \$15,000." What is the condition there?

Colonel DENNY. The only quarters we had there were burned. They were frame and were a complete loss.

The CHAIRMAN. When were they burned?

Colonel DENNY. Several years ago. We have not been certain as to whether that would be a permanent station until very recently, and we are occupying a building that belongs to the construction department of the Navy, and in one end of that on the second floor is where one officer lives. The other officer, or other two officers who

ought to be there have no quarters at all, and I think at present they are living at Pensacola, distant about one hour from the yard.

The CHAIRMAN. What is the situation down at Guantanamo?

Colonel DENNY. There is a little building there about 20 feet square, which is made of shell boxes and clothing boxes nailed together by the men themselves. It is absolutely disgraceful, and there is no comfort or convenience whatever. We have several reports from officers who inspected it, and they reported in about the language I have used.

The CHAIRMAN. How many men have you there?

General ELLIOTT. At the present time only about 25, but they have been doing light-house duty and signal duty and all that. But, Mr. Chairman, they have gone there to stay. That land belongs to the Navy.

Mr. KITCHIN. Why do you use the words "temporary marine barracks?"

General ELLIOTT. I think that is going to be the great station for defending the Panama Canal. It is one of the best harbors in the world and will be defended and held.

Mr. KITCHIN. Then ought we not to build a permanent barracks there?

General ELLIOTT. No, sir; because I do not think the time has come yet. This little house will never be abandoned. We will build it right on the key where they built the navy-yard.

Mr. KITCHIN. Do you propose building a wooden structure?

General ELLIOTT. Yes, sir; with a concrete foundation to keep the ants from eating it up.

The CHAIRMAN. The next item is, "For construction of an addition to the marine barracks, navy-yard, Bremerton, Wash., \$12,000." What is the condition there at the present time?

Colonel DENNY. The barracks are too small to accommodate the command, and when the Commandant of the Corps and I inspected that station about two years ago we found about 40 or 50 men living in tents. That station is growing in importance, and the commandant of the station has repeatedly asked for more men. There are some enlistments out there and some of the enlistments made in St. Paul, Detroit, and the Northwest generally are sent there. The men are put to great discomfort at the present time, and the proposition here was to add a wing or a story to the present structure and increase the comfort of the men. It is a remote station, far from Seattle. One gets there by water. More physical comforts would greatly add to the men's contentment.

The CHAIRMAN. The next paragraph simply says "Toward completion of officers' quarters, marine barracks, Bremerton, Wash., \$10,000." Are you constructing the barracks?

Colonel DENNY. No, sir.

The CHAIRMAN. How much have you there?

Colonel DENNY. One house. The idea was to build another small house and complete the scheme so as to have three officers at that post, the commanding officer and two duty officers.

The CHAIRMAN. The next item is, "For construction of marine barracks and officers' quarters, navy-yard, Mare Island, California, to cost \$180,000." What is the condition there?

Colonel DENNY. It is the same matter that we reported to the committee last year, that the present barracks was seriously injured by the earthquake, and two boards of survey who have reported on the subject tell us that it is unsafe and should be abandoned. The commandant of the station, Admiral McCalla, who personally inspected the barracks, accompanied by the civil engineer, an expert in construction work, made an indorsement on one of the reports to the effect that the building was unfit for habitation and should be abandoned for all purposes—should be torn down, as a matter of fact.

The CHAIRMAN. How much of this appropriation will go to barracks and how much to officers' quarters?

Colonel DENNY. The idea was to build two officers' quarters and to put all the rest into the barracks.

Mr. KITCHIN. What is it estimated the quarters will cost?

Colonel DENNY. It is a difficult thing to answer that question, although our estimate was based upon a report from one of the leading architects of San Francisco. The reason why it is difficult is the very high cost of labor in that market. It is on an ascending scale all the time. For instance, plasterers were getting \$8 a day and shortly afterwards getting \$9 and now we expect it to go up to \$10, and in this estimate which we submit for the barracks especially, which is the main thing out there, more than the officers' quarters, we have considered the fact that the cost of material and labor is very high and it will be for many years to come, I dare say, with the great quantity of construction work to be done there.

General ELLIOTT. The idea was to build with hollow concrete blocks, it being cheaper than any other way we could build, and unless labor stopped us we could put some of our men to help mixing the concrete. They could lend a hand.

Mr. KITCHIN. Under the best estimate you have would these officers' quarters cost \$20,000 apiece?

Colonel DENNY. No, \$24,000; \$12,000 each.

The CHAIRMAN. The next item is "For construction of temporary marine barracks and officers' quarters, improving parade grounds, etc., naval station, Cavite, Philippine Islands, \$75,000." Have you any there now?

Colonel DENNY. We have a building which the quartermaster constructed out of allotments made to him covering a period of three years, about \$6,000 a year, about \$18,000 to \$20,000. If you remember your visit there, Mr. Chairman, it is on the stone wall facing Manila, not very far from the old magazine. It is a frame building entirely. It is substantial in a way and will probably last for six or eight years if the ants do not go for the foundation; but that, if you remember, is a storehouse and administration building where the officers are located and where supplies are kept. We have had to give up several buildings within the navy-yard proper, they being required by the Navy; for instance, one machine shop, one storehouse for the paymaster's department, and the men that were there have gone to Olongapo, and some have been put in quarters which we have rented outside the reservation.

General ELLIOTT. The Surgeon-General came to see me and told me that he had inspected Olongapo and the men living in Cavite, and the sickness was 12 per cent, where at Olongapo it was only less than 4 per cent. He recommended that we do something in the way of

getting these men over to the point where he has his hospital. There are 6,000 people within a space of 600 by 400 yards crowded right up against us.

The CHAIRMAN. That, I think, concludes your estimates. Have you anything further that you desire to say to the committee?

General ELLIOTT. No, sir. I desire to say that we are called upon and will be called upon to do more than we have men to fill requirements.

The CHAIRMAN. We are very much obliged to you.

Thereupon the committee adjourned.

Statement showing stations of officers and enlisted men of the United States Marine Corps in detail.

STATIONS IN THE UNITED STATES.

	Officers.	Enlisted men.
Headquarters Marine Corps	11	64
Assistant quartermaster, Philadelphia, Pa.....	2	28
Berkeley, Cal.....	2	13
Annapolis, Md.....	4	50
Boston, Mass.....	6	217
Charleston, S. C.....	1	51
Iona Island, N. Y.....	0	12
Key West, Fla.....	0	12
League Island, Pa.....	6	258
Mare Island, Cal.....	6	423
Narragansett Bay, Newport, R. I.....	1	87
Naval Home, Philadelphia, Pa.....	0	28
Navy-yard, Washington, D. C.....	2	77
New Orleans, La.....	0	18
New York, N. Y.....	8	375
Norfolk, Va.....	12	316
Pensacola, Fla.....	2	59
Port Royal, S. C.....	0	22
Portsmouth, N. H.....	3	86
Puget Sound, Wash.....	1	139
San Francisco, Cal.....	1	63
Sitka, Alaska.....	1	39
Washington, D. C.....	5	345
Total.....	74	2,782

RECRUITING SERVICE.

District of—		
Buffalo, N. Y.....	1	12
Georgia.....	2	13
Illinois.....	1	7
Iowa.....	1	18
Maryland.....	0	2
Massachusetts.....	0	10
Michigan.....	1	7
Minnesota.....	1	21
Missouri.....	1	6
New York.....	1	12
Ohio.....	1	11
Pennsylvania.....	0	6
Total.....	10	125

RECEIVING SHIPS.

U. S. R. S. Franklin.....	1	49
U. S. R. S. Hancock.....	1	90
U. S. R. S. Hartford.....	0	18
U. S. R. S. Independence.....	0	35
U. S. R. S. Lancaster.....	0	45
U. S. R. S. Pensacola.....	0	22
U. S. R. S. Philadelphia.....	0	13
U. S. R. S. Southery.....	1	81
U. S. R. S. Wabash.....	1	26
Total.....	4	379

*Statement showing stations of officers and enlisted men of the United States Marine Corps
in detail—Continued.*

FOREIGN SERVICE.

	Officers.	Enlisted men.
Culebra, Virgin Islands	2	84
Guam, Ladrone Islands	4	103
Guantanamo, Cuba	0	34
Honolulu, Hawaii	2	49
Isthmian Canal Zone, Panama	8	202
Midway Island, N. P.	1	21
Philippine Islands	35	1,196
San Juan, P. R.	4	101
Tutuila, Samoa	0	1
Peking, China	3	124
Yokohama Hospital, Japan	0	18
Cuba	39	967
Total	98	2,900

AT SEA.

U. S. S. Alabama	2	60
U. S. S. Baltimore	1	38
U. S. S. Boston	1	41
U. S. S. Buffalo	0	14
U. S. S. Charleston	2	56
U. S. S. Chattanooga	1	24
U. S. S. Chicago	1	43
U. S. S. Cincinnati	1	34
U. S. S. Colorado	2	59
U. S. S. California	1	48
U. S. S. Connecticut	2	60
U. S. S. Dolphin	0	10
U. S. S. Dubuque	0	12
U. S. S. Galveston	1	26
U. S. S. Helena	1	31
U. S. S. Illinois	1	54
U. S. S. Indiana	2	48
U. S. S. Iowa	2	65
U. S. S. Kearsarge	2	57
U. S. S. Kentucky	2	60
U. S. S. Louisiana	2	64
U. S. S. Maine	2	65
U. S. S. Maryland	2	60
U. S. S. Mayflower	0	10
U. S. S. Missouri	2	58
U. S. S. Mohican	0	23
U. S. S. New Jersey	2	44
U. S. S. Ohio	1	75
U. S. S. Paducah	0	11
U. S. S. Pennsylvania	2	59
U. S. S. Rainbow	1	47
U. S. S. Raleigh	0	31
U. S. S. Rhode Island	2	42
U. S. S. St. Louis	1	48
U. S. S. Tacoma	1	24
U. S. S. Tennessee	2	38
U. S. S. Virginia	2	57
U. S. S. Washington	1	59
U. S. S. West Virginia	2	73
U. S. S. Wilmington	1	29
U. S. S. Wolverine	0	24
U. S. S. Dixie	9	305
Total	60	2,086

UNDER ORDERS, ETC.

Under orders	15	63
Special duty	6	0
On leave (en route to United States)	1	0
On sick leave	2	0
In Army and Navy General Hospital, Fort Bayard, N. Mex.	2	0
Total	26	63

Statement showing stations of officers and enlisted men of the United States Marine Corps in detail—Continued.

RECAPITULATION.

Distribution.	Officers.	Enlisted men.
Stations in the United States	74	2, 782
Reeruiting service	10	125
Reeeiving ships.....	4	379
Foreign service.....	98	2, 900
At sea.....	60	2, 086
Under orders, etc.....	26	63
Grand total	272	8, 335

UNITED STATES MARINE CORPS.

Rank.	Total number allowed by law.	Number on for-eign duty ashore.	Number at sea.	Number on shore duty in United States.	Remarks.
Colonels.....	6	2	0	5	One additional in grade.
Lieutenant-colonels.....	6	2	0	4	
Majors.....	15	10	1	5	Do.
Captains.....	72	29	18	23	
First lieutenants.....	85	28	17	37	
Second lieutenants.....	72	40	18	10	

There are at present, according to the above figures, 33 per cent of the entire number of officers in the Corps ashore, and 67 per cent at sea or on foreign duty. Attention is called to the impossibility of relieving from foreign duty and sea duty 67 per cent with 33 per cent.

MEMORANDUM.

The line of the Regular Army consists of—

	Men.
15 regiments of cavalry	13, 020
Artillery Corps.....	18, 166
30 regiments of infantry	25, 649
Signal Corps.....	1, 212
	58, 047

which gives the following proportions of officers to men of the line of the Army and the Marine Corps:

	Army.		Marine corps.	
	Officers.	Men.	Officers.	Men.
Lieutenant-general	1	58, 047	.....	.....
Major-generals.....	7	8, 292	.....	.....
Brigadier-generals.....	18	3, 225	1	8, 771
Colonels	64	907	6	1, 461
Lieutenant-colonels	67	866	6	1, 461
Majors.....	190	305	15	585
Captains.....	888	66	72	122
First lieutenants.....	888	66	85	103
Second lieutenants	870	67	72	122

	Staff.	
	Army.	Marine Corps.
Brigadier-generals.....	8	.....
Colonels	32	3
Lieutenant-colonels	45	3
Majors	113	6
Captains	137	9
First lieutenants.....	265	.....

The Army has 1 staff officer for every 100 men.
The Marine Corps has 1 staff officer for every 418 men.

[No. 11.]

BUREAU OF CONSTRUCTION AND REPAIR—STATEMENT OF REAR-ADMIRAL WASHINGTON L. CAPPS, CHIEF CONSTRUCTOR.

COMMITTEE ON NAVAL AFFAIRS,
Washington, D. C., December 17, 1906.

The CHAIRMAN. The first item under the Bureau of Construction and Repair is: "Construction and repair of vessels: For preservation and completion of vessels on the stocks and in ordinary," etc., and the estimate is \$7,900,000. Last year the appropriation was \$7,600,000. This year the Bureau is asking for an increase of \$300,000. Will you have any large unexpended balance this year?

Admiral CAPPS. Pardon me, sir. The \$7,600,000 was the amount of the original appropriation, which was increased by \$300,000 reappropriated from the unexpended balance of a previous year, so that the amount asked for this year is identical with the amount allowed last year.

The CHAIRMAN. That is by reason of the reappropriation?

Admiral CAPPS. Yes, sir.

The CHAIRMAN. Could we reduce this appropriation this year?

Admiral CAPPS. No, sir. The continuance of the actual rate of expenditure for the first five months of this fiscal year will leave practically no balance from our last year's appropriation of \$7,900,000. The amount of work on ships in commission is constantly increasing, with consequently increased demands upon this appropriation.

Mr. KITCHIN. It seems to me that last year we appropriated \$7,900,000, including the \$300,000 item we reappropriated.

Admiral CAPPS. Yes, sir; that is the fact.

The CHAIRMAN. Will you kindly furnish a statement showing the expenditures for these different items?

Admiral CAPPS. I can furnish a statement showing the expenditures under the various titles in the appropriation, just as I did last year. I have such a table prepared for the fiscal year ending June 30, and will append it to my remarks. (See Appendix No. 3.)

Mr. KITCHIN. Will that show the amount expended at each yard?

Admiral CAPPS. I have before me a table showing the amount expended at each navy-yard, and will append it to my statement. (See Appendix No. 2.)

The CHAIRMAN. Last year there was an amendment offered on the floor extending this proviso—

Provided, That no part of this sum shall be applied to the repairs of any wooden ship, when the estimated cost of such repairs, to be appraised by a competent board of naval officers, shall exceed ten percentum of the estimated cost.

to all ships, and I think at that time you submitted your views.

Admiral CAPPS. In my testimony of last year I explained how such a prohibition, with respect to the repair of iron and steel ships, would possibly fail in accomplishing good results. The prohibition with respect to wooden ships was made about twenty years ago, to prevent the practical rebuilding of wooden ships under the guise of repairs.

The general overhauling of a steel ship that has been in service for four or five years, with a view to bringing such a vessel up to date as regards armament, arrangement of magazines, supply of ammunition, installation of modern auxiliaries, and fittings, so far as practicable, in addition to the overhauling and repairs necessitated by her previous service, would involve an expenditure of from 15 to 30 per cent of the original cost, but when the vessel was so overhauled and brought up to date it would, as a fighting machine, be a better ship than it was in the beginning, on account of the changes in armament and additional fittings installed as a result of experience gained during the period which has elapsed since her original construction. Therefore, if the ship were condemned whenever the cost of repairs exceeded 10 per cent of the original cost of the vessel, you would not be able to modernize any of those ships.

The CHAIRMAN. The idea was not to condemn the ship, but to make the Bureau come to Congress for a specific appropriation in each case.

Admiral CAPPS. It is entirely possible to defer such extensive repairs until specific authorization has been obtained from Congress, but it would cause a possible delay of from twelve months to two years and would make it extremely difficult for the Navy Department to adjust in a satisfactory and economical manner the work to be undertaken at the various navy-yards.

Prior to undertaking a general overhauling at any navy-yard, a ship on a foreign station must first be sent home, subjected to a thorough survey, plans of alterations and improvements prepared, and estimates of cost of necessary work submitted. A complete survey, as prepared at a navy-yard, with plans and estimates, is then submitted to the Department for its action. Should it be necessary to await the specific action of Congress before work could be undertaken, it would be quite impracticable for the Department to assign work to the various navy-yards in such manner as would permit its most expeditious and economical performance, and it is highly probable that such action as Congress might desire to take would be based wholly upon the expert advice of the Department, as contained in the detailed reports of the board of survey. It should be noted in this connection that the detailed report of a general survey on a battle ship would contain probably between 150 and 200 items, these matters being gone into in considerable detail.

The CHAIRMAN. I wish you would just briefly state the method that you pursue before the order is issued by the Secretary of the Navy to begin the overhauling of a ship; how many different boards pass upon it, etc.

Admiral CAPPS. In the first place, a report is submitted by the commanding officer of the vessel showing the condition of the ship and the repairs which, in his judgment, based upon actual experience in service, are needed. This report is given brief preliminary criticism

by the bureau of the Navy Department concerned, and submitted to the Department with the recommendation that a general survey be ordered. The Department having approved the holding of a general survey on the vessel, the papers are then transmitted to the navy-yard at which the vessel is to be repaired, with instructions to the commandant to order a board of survey. This board of survey, organized in accordance with statute law, is composed (in the case of construction and repair surveys) of an officer designated by the Department (usually a captain or commander), the naval constructor or assistant naval constructor attached to the yard, and such master workmen as will have work to perform on the vessel. Plans are made showing the various proposed alterations, and detailed estimates of cost and time are prepared. The survey is then sent to the commandant and his action thereon noted; it is then forwarded to the Secretary of the Navy, who transmits it to the bureau concerned. It is then considered in detail by the bureau officers, having in view the experience obtained with other vessels of similar type and the improvements which have taken place on later vessels; the survey is then sent back to the Secretary of the Navy with the Bureau's comments and recommendations, and in the case of large surveys, the Department makes further reference to the board of construction, which is composed of all the chiefs of bureaus having cognizance of work on board ship. It is finally returned to the Department with the action of the board on construction noted, and receives the Department's final action. It thus appears that work in connection with the general overhauling of a vessel is given most careful attention by a large number of officials directly concerned with such work. It is not infrequent that surveys are returned to navy-yards for revision by the board of survey, with a view to decreasing the expenditure.

The CHAIRMAN. Has not the Secretary made a new order to the effect that the Assistant Secretary shall look over the vessel before there is any general overhauling?

Admiral CAPPS. The Assistant Secretary, as a matter of fact, does usually look over the vessel. Such inspection is a part of his general duties, but must, of course, be only of a general nature. No one man can critically consider in a few hours what more than half a dozen men have been working out for several weeks.

Mr. KITCHIN. Under that condition, could there be any delay in leaving this matter of repairing where the percentage of cost exceeds 10 per cent to Congress until after the Secretary of the Navy has made his final recommendation?

Admiral CAPPS. You mean to refer the report of the board, for instance, to Congress before going to the Secretary?

Mr. KITCHIN. No, sir. I mean after the Secretary has taken action, then refer it to Congress. It seems to me there never could be more delay than probably ten months, we will say, if Congress desired to act upon it.

Admiral CAPPS. In my judgment, the condition would seem to be this: If a vessel was about to return to the United States for a general overhauling and did not arrive in time to have a complete survey prepared before the adjournment of Congress, all work would have to be suspended and the vessel laid up in ordinary until the survey could be submitted to Congress, passed upon in committee, and approved in connection with the current naval appropriation bill. As

such bills do not ordinarily pass Congress before May or June in the long session, it is quite possible that it would be a year or a year and a half before repairs could actually be begun.

Mr. KITCHIN. If they got it ready by March and got it in before Congress adjourned, there would be no delay, probably not over two weeks, but if it was a thing that they could not get ready until March, it would have to go until December.

Admiral CAPPS. Unless we could regulate the movements of vessels and their being placed out of commission, with respect to the working conditions prevailing at navy-yards, it would be wholly impracticable to so arrange matters that there would be a delay of less than one year. In course of time the placing of vessels out of commission for general overhauling may be determined with greater certainty and may be adapted to the needs not only of the fleet, but of the repair stations. At the present time, however, the exigencies of the service are such as to make such ideal arrangements out of the question.

The CHAIRMAN. How many of the big ships have been overhauled?

Admiral CAPPS. The *Indiana* has recently been given a very thorough overhauling. The *Iowa* and *Kentucky* received quite an extensive overhauling several years ago, but this overhauling was not nearly so thorough as that on the *Indiana*. The *Brooklyn* and *New York* were also given quite extensive repairs before beginning their last cruise. The *Massachusetts* and *Oregon* are now in course of overhauling, and the *Wisconsin* is being given a general survey.

The CHAIRMAN. What was the cost of overhauling the *Indiana*?

Admiral CAPPS. Under this Bureau, about \$600,000.

The CHAIRMAN. I thought the *Massachusetts* was to be overhauled?

Admiral CAPPS. Yes, sir; some of the repairs are being held up pending further revision of the survey.

The CHAIRMAN. What other large ships have you in contemplation?

Admiral CAPPS. The *Wisconsin* is out of commission at Puget Sound to be generally overhauled. The *New York* is actually being overhauled at Boston, the *Massachusetts* at New York, and the *Oregon* at Puget Sound. The *Illinois* and the *Alabama*, sister ships of the *Wisconsin*, will probably be out of commission before the end of next year.

The CHAIRMAN. You can not tell exactly what this general overhauling is going to cost until you get to the end of it, but, as a general proposition, what will it amount to? What percentage of the ship?

Admiral CAPPS. In all departments?

The CHAIRMAN. Yes, sir.

Admiral CAPPS. If you use as a basis the total cost of the ship as a fighting machine, say \$6,000,000 for the *Indiana*, it would be in the neighborhood of 15 to 20 per cent.

The CHAIRMAN. In the case of the *New York*, for instance, that is a cruiser?

Admiral CAPPS. It will be a little higher because the cost of hull and machinery forms a much greater percentage of the total cost of a cruiser than do similar items in the case of a battle ship. The total cost of the *New York* was about \$4,500,000, as I recall it.

Mr. KITCHIN. What will the percentage for repairs amount to, 25 or 30 per cent?

Admiral CAPPS. In the unarmored cruisers it will be as high as 30 per cent. In the case of battle ships, in the neighborhood of 20 per cent.

Mr. LOUD. What was the cost of the repairs to the two Spanish boats at the Portsmouth yard, \$100,000?

Admiral CAPPS. About \$125,000 each.

The CHAIRMAN. How often would a ship need such an extensive overhauling as, for instance, the *Indiana* or the *New York*?

Admiral CAPPS. Probably not more than once, and certainly not more than twice in a lifetime. The *Indiana* had been in commission for ten years before being overhauled.

Mr. KITCHIN. What is a lifetime, twenty years?

Admiral CAPPS. About twenty years. That may be regarded as the lifetime, not of the hull and outfit of the vessel, but of the vessel's efficiency as a fighting machine under average conditions, and when opposed to vessels of the latest design.

The CHAIRMAN. She would still be, to a certain extent, a fighting machine?

Admiral CAPPS. She would still be a good fighting machine of her day, and would render good service when opposed to vessels of approximately the same age of hull and battery.

Mr. KITCHIN. When did the *Alabama* go into commission, if you recollect, about seven years ago?

Admiral CAPPS. The first commission was October 16, 1900, a little over six years ago.

The CHAIRMAN. Are you contemplating overhauling her?

Admiral CAPPS. As soon as she can be spared from the fleet.

Mr. KITCHIN. She needs repairing now?

Admiral CAPPS. Yes, sir; very much. As a rule, it is very undesirable to keep a vessel of that class in commission more than four or five years; that is, you would probably have a very much less bill for general overhauling and would keep the ship in a more efficient condition if the general overhauling is not unduly delayed.

The CHAIRMAN. Have you had a survey made of her?

Admiral CAPPS. No, sir; we do not do that until she is out of commission.

The CHAIRMAN. Where has she been?

Admiral CAPPS. In the fleet.

The CHAIRMAN. After this general overhauling, in your judgment, is the ship practically as good as new or better?

Admiral CAPPS. A ship of her class, after being generally overhauled, is a more efficient fighting machine than she was when new, because a great many of the changes directly increase the military efficiency, including, as they usually do, improved arrangements for the stowage and supply of ammunition, etc.

Mr. KITCHIN. The hull will last?

Admiral CAPPS. The hull will last indefinitely if properly cared for, and there is a very rigid system of inspection for naval vessels, which insures proper care. Portions like the inner bottom under the machinery, lower plates of coal-bunker bulkheads, etc., and fittings in general have to be renewed or repaired; also nearly all the

auxiliary machinery, including capstans and winches, steering gear, etc., have to be overhauled; but the outside hull is usually in excellent condition.

The CHAIRMAN. I wish you would put in the hearings your views on the question of submitting to Congress the estimates for general overhauling and also the wisdom of extending the 10 per cent provision to all ships. You did submit your views very fully last year.

Admiral CAPPS. Yes, sir. The principal objections that occur to me are the delay in undertaking the work and the inability of the Department to properly provide for a reasonable succession of work at navy-yards, in view of the uncertainty as to the amount of repairs which Congress might authorize or the date upon which such repairs can be undertaken. In any event it appears to me that it would be wholly impracticable for Congress or any of its committees to go into the details of the repairs to ships in so complete a manner as they are already gone into by officials of the Navy Department. Each general survey of a large vessel in the Bureau of Construction and Repair alone involves from 150 to 200 or more items of work, and it would appear that in the end the committee of Congress charged with such supervision would be compelled to rely upon such expert recommendation as it might receive from the Navy Department. This matter was gone into so thoroughly last year, as previously noted by the chairman, that I submit below quotations from last year's hearings, which give the views of the chief constructor in this matter:

The CHAIRMAN. Now, I want to go on with Admiral Capps a little bit on this question of limiting the cost. Admiral, do you think it would be wise to limit the cost of repairs on these vessels? Would it not tend toward the more careful consideration of the subject of overhauling ships?

Admiral CAPPS. I can not say it would tend to a more careful consideration, because I believe that is done very conscientiously now. It would absolutely prohibit, however, the extensive overhauling of certain vessels when the estimated cost of overhauling exceeded a certain amount. I am of the opinion, moreover, that it would really be shifting to Congress a responsibility for determining details which the Navy Department should shoulder. Should Congress decide to limit the cost of general overhauling of comparatively modern steel vessels to a definite percentage of the cost of a new vessel of like size and material, I sincerely trust that the percentage determined upon will not be so low as to compel the abandonment of a vessel which, by the expenditure of, say, 25 per cent of her original cost, will be a much more efficient fighting machine than was the same vessel when first built; for it must be borne in mind that a very large part of the cost of overhauling war ships is due to improvements resulting from developments in naval material since the vessel was originally built.

The CHAIRMAN. Take the ordinary repairs on ships. Will they amount to 10 per cent on the cost?

Admiral CAPPS. You mean per annum?

The CHAIRMAN. Yes.

Admiral CAPPS. Oh, not anywhere near it. For battle ships and armored cruisers the annual cost of repairs rarely exceed 3 per cent of their first cost, and is frequently below 1 per cent of the original cost of the vessel. In previous testimony, in reply to the various questions about limiting the cost of repairs, it was stated that material reductions were frequently made from those required by commanding officers. Certain instances of this character which have occurred during the past year will clearly illustrate this. For instance, on the *Alabama*, which has been in commission for five years, the commanding officer requested certain repairs and alterations, and the board of survey recommended an expenditure of over \$53,000, but only \$19,000 was approved by the Bureau—practically a third of the amount recommended by the board. In the case of the *Verrada*, in a similar manner, an expenditure of \$13,000 was recommended and urged, and repairs to the extent of only \$4,400 were approved by the Bureau.

On the *Florida*, a similar vessel, over \$12,000 was recommended by the board of survey to be expended, acting upon the commanding officer's request for repairs, and only \$6,000 was approved. On the *Missouri* over \$10,000 was recommended, and only \$5,000 was approved. On the *Kearsarge*, which had been continuously in commission for six years, \$67,000 was recommended as urgently needed for repairs and alterations, and less than \$40,000 was approved. On the *Columbia* \$11,000 was recommended by the board of survey to be expended in repairs, and only \$3,000 was approved by the Bureau. Some of the above charges represent the docking and minor repairs at semiannual overhauls, while the larger figures represent the more extensive annual repairs. The above instances are a few, taken from many, to show that these matters are carefully considered, and requests for repairs which, in the opinion of commanding officers, are urgent are often wholly disapproved in order that the appropriations under the cognizance of the Bureau may be expended where there is the most vital need for them.

It may also be noted that since January 1, 1906, items of work involving expenditures of nearly \$350,000, which have been urgently recommended by commanding officers, have after careful examination been disapproved as not being sufficiently urgently required to necessitate execution at that time. I am very much of the opinion that every reasonable care is now taken by the Department to limit the cost of repairs to the least amount practicable having due regard to the military exigencies of the service. It must be borne in mind, however, that improvements in military matériel are constantly taking place and that in order that the fleet may be kept in efficient condition repairs and alterations to an extent much greater than that prevailing in the mercantile marine must be promptly undertaken. The chief constructor desires, moreover, to invite special attention to the fact that although the number of large ships in commission is constantly increasing, the total appropriation asked for this year is less than the amount appropriated for the fiscal years ending 1903, 1904, and 1905, and is exactly the same as the appropriation for the fiscal year ending June 30, 1907. In view of all the circumstances the chief constructor does not believe it to be advisable to delay the undertaking of large repairs to vessels until same have been passed upon by Congress, unless the limiting percentage be made sufficiently high to cover all ordinary cases, and, as stated last year, this percentage should, in my judgment, be not less than 30 per cent.

MR. LOUD. Can you tell us the cost of rebuilding the two ships out in the Philippines, at Cavite—one a monitor?

ADMIRAL CAPPS. I can not recall the approximate amount. Such work is very expensive, however. I have recommended most definitely that general overhauling of this character be not done again. In fact, my annual report last year, and again this year, invited attention to the importance of doing all large overhauling work in navy-yards within the continental limits of the United States.

THE CHAIRMAN. And keep our own labor employed?

ADMIRAL CAPPS. Yes, sir. Nothing but urgent or incidental repairs due to wear and tear should be made on foreign stations, whenever practicable.

MR. LOUD. Will it require 3,000 men to keep up incidental repairs?

ADMIRAL CAPPS. I do not think they have that many there now.

MR. LOUD. When we were there they had.

ADMIRAL CAPPS. I should say, if the fleet continues to remain as at present, there could be a reduction of 20 per cent, and possibly more, but it has been my experience that the work performed per

diem by the class of men available at Cavite is very much less than the amount required and obtained from mechanics in our home yards.

Mr. LOUD. It looks like a pretty poor and expensive place to rebuild a ship.

Admiral CAPPS. It is undesirable for such extensive work. The Bureau is strongly on record in regard to that. One of the first things the present Chief of the Bureau did was to strongly recommend against it, and his predecessor made similar recommendation.

The CHAIRMAN. I wish you would put in the hearing a statement showing the ships that it is proposed to repair and overhaul during the coming year.

Admiral CAPPS. The following battle ships and large cruisers will be under general repair during the current fiscal year: *Massachusetts*, *Oregon*, *Wisconsin*, *New York*, and *San Francisco*. The ships to be repaired would include the whole fleet now in commission, since the fleet, as a rule, comes to a navy-yard twice each year—once for minor repairs and docking and the other time for such repairs and alterations as are absolutely necessary and can be performed within forty-five days. There will also be rather heavy repairs on all of the battle ships in connection with the installation of the latest system of "fire control," a preliminary outfit having already been installed on the *Virginia*.

The CHAIRMAN. The estimates with respect to the construction plants at the different navy-yards are the same as last year, all of them?

Admiral CAPPS. Yes, sir.

The CHAIRMAN. Except the construction plant at Charleston, where an appropriation of \$30,000 is asked?

Admiral CAPPS. Yes, sir. We have had no appropriation made for that yard, and the yard may possibly be ready for operation in the next eighteen months. It is therefore necessary to make provision for the machinery plant. Of course, \$30,000 is not more than half enough to equip one large shop, but we are already transferring machinery from Port Royal and we are getting some new tools from our current appropriation.

Mr. LOUD. Do you not think it would be better if the completion of the yard at Charleston was deferred as long as possible?

Admiral CAPPS. My recommendation would be not to do any work there until the yard is properly prepared for such work, including the dock.

The CHAIRMAN. The dock is not ready?

Admiral CAPPS. No, sir.

The CHAIRMAN. It will be ready before long?

Admiral CAPPS. The dock itself is in a very advanced stage, but a great deal of dredging will have to be done in order to get to the dock.

Mr. LOUD. Have we not enough yards in commission to do all the work?

Admiral CAPPS. I think I stated last year that if it was a pure question of doing the work and the work was properly distributed it could all be done in two yards. That does not take into account the necessities in time of war, however, or even the exigencies in time of peace when fleet operations have to be considered.

Mr. LOUD. I referred to the time of peace.

Admiral CAPPS. In time of peace the maintenance of the fleet could be taken care of by three yards, two on this coast and one on the Pacific coast, provided, of course, that only portions of the fleet were sent to these yards from time to time. That would seriously interfere, however, with the fleet programme.

The CHAIRMAN. The *Connecticut* was built in the New York Navy-Yard. Has she gone into commission?

Admiral CAPPS. She has been in commission for some time, and has sailed from New York.

The CHAIRMAN. Have you made your report upon her?

Admiral CAPPS. As to the cost?

The CHAIRMAN. Yes, sir.

Admiral CAPPS. We have asked for details of the final cost, but the data is not yet in shape for suitable presentation.

The CHAIRMAN. When will you be able to make that report?

Admiral CAPPS. I hope to obtain a final report within the next few weeks.

The CHAIRMAN. We would also like a report of the amount that was expended to get that yard into shape to build the *Connecticut*.

Admiral CAPPS. That is a more difficult thing. I can give it to you, but it means an arbitrary statement of what was spent for the *Connecticut* and the improvement of the yard as a whole. The *Connecticut* was built when a great deal of other work was being carried on concurrently, and it would mean an arbitrary decision as to what was purely for the *Connecticut* and what was for the yard as a whole.

The CHAIRMAN. Can you state about what was the cost of the *Connecticut* as compared with that of the *Louisiana*?

Admiral CAPPS. The cost of the *Connecticut*, without the armor and armament, will be very close to \$4,600,000. The cost of the *Louisiana*, as compared with similar work done by the Government, will be in the neighborhood of \$4,200,000.

The CHAIRMAN. A difference of about \$400,000?

Admiral CAPPS. Yes, sir.

Mr. LOUD. Did that \$4,600,000 include a portion of the fixed expenses of the yard?

Admiral CAPPS. It includes all the cost of power and the cost of foremen and the proportionate cost of salaries of officers, and all that sort of thing; but no charges in the navy-yard take into account a depreciation of the plant as a whole, or repairs or renewals. In other words, the cost of work at a navy-yard can not be accurately compared with the cost of work at private establishments.

Mr. LOUD. But it includes a portion of the administrative force—the pay department, etc.?

Admiral CAPPS. All of that; in fact, the cost of the services of all the personnel concerned.

The CHAIRMAN. Has this vessel been given a trial trip?

Admiral CAPPS. She has just left the navy-yard.

The CHAIRMAN. She will be given a trial trip?

Admiral CAPPS. Yes, sir. The *Connecticut* has at present a comparatively green crew, and it is desired by the authorities to give them a chance to know the ship before having a formal trial. It is

also desired to utilize the *Connecticut* in the forthcoming naval maneuvers, so that a trial at this time seems impracticable.

The CHAIRMAN. What was the difference in time of the building of those two ships?

Admiral CAPPS. I think it is fair to say that the time of construction of each ship was about the same. The *Connecticut*, at the time of the delivery of the *Louisiana*, was at about the same stage of completion. The *Louisiana* was placed in commission before the *Connecticut* for the reason that it was necessary to take over the vessel from the contractors in an incomplete state, due to the nondelivery of material, for which the Government was responsible. To have forced the contractors to hold the vessel until such material was delivered and installed would possibly have involved the Government in suits for damages for delay in matters for which it was itself responsible. The vessel being delivered, it was advisable to put a crew on board and complete the work at the navy-yard.

Mr. KITCHIN. Why was the Government negligent in delaying that matter?

Admiral CAPPS. The Government was not negligent, but subcontractors were delayed in their deliveries. The principal material which caused delay was armor and armament, particularly armament; also some electrical material. The contract provided that the contractors install this material, but there were many delays in delivery, due to various causes, and the material could not be completely installed by the contractors.

Mr. KITCHIN. Can you recall whether the same contractors were to furnish this material for the *Louisiana* and the *Connecticut*?

Admiral CAPPS. In some cases they were the same.

Mr. KITCHIN. Did they deliver it to the *Louisiana* prior to delivering it to the *Connecticut*?

Admiral CAPPS. In the case of motors, guns, etc., they did not. That was the material that was delaying the completion of the ship, and to protect itself the Government accepted delivery under the terms of the contract.

Mr. KITCHIN. Did all these private contractors apparently exert themselves to comply with the contracts on the *Connecticut* as much as on the *Louisiana*?

Admiral CAPPS. I do not think there was any discrimination.

The CHAIRMAN. There was no partiality shown, in your judgment?

Admiral CAPPS. None whatever. There were some deliveries of armor in the early stages of building that were made more promptly on the *Louisiana*, but later the *Connecticut* was given preference. The Department, as far as I am aware, did its best to give equal consideration to each ship.

The CHAIRMAN. You gave us the cost of the hull and machinery, which showed a difference of about \$400,000. On the total cost of the ship, how did it come out?

Admiral CAPPS. The other articles would be common to the two ships inasmuch as they are material supplied by the Government.

The CHAIRMAN. The real difference in cost of the hull and machinery would constitute the difference on the whole ship?

Admiral CAPPS. Yes, sir; of course that does not include the cost of leave and holidays. That is charged to a separate account.

The CHAIRMAN. What would that amount to?

Admiral CAPPS. I can not give it to you exactly; in the neighborhood of \$150,000, I should say.

Mr. KITCHIN. What about the cost of inspection?

Admiral CAPPS. That is all included.

Mr. KITCHIN. In both cases?

Admiral CAPPS. Yes, sir.

Mr. LOUD. Have you begun work on the two colliers?

Admiral CAPPS. Yes, sir.

Mr. LOUD. Are the keels laid?

Admiral CAPPS. No, the keels are not laid. The material is ordered, but it has not been received.

The CHAIRMAN. Will the statement of cost of the *Louisiana* and *Connecticut* show the difference in cost of the various items?

Admiral CAPPS. No, sir; it would show only the difference in total cost of the two vessels, also the cost of changes on the two vessels, since it is not expected that the contractor will give details of the cost of his work, the only cost upon which the Department can count with certainty being the contract price and the cost of changes. It is quite probable that the difference in cost of the two vessels is largely due to the difference in the hours of labor and a slight difference in the actual cost of labor at the two yards, the per diem pay for nearly all kinds of labor being greater at New York than at Newport News. However, the contract price of a vessel does not necessarily mean the actual cost of building the vessel.

The CHAIRMAN. He makes a profit?

Admiral CAPPS. The builder undoubtedly aims to make a profit, but in some cases I think it has been very close to a deficit.

The CHAIRMAN. There is a good deal of competition, is there not?

Admiral CAPPS. The competition is very keen. For instance, a sister ship to the *Louisiana* was contracted for more than two years later at a price more than \$240,000 less than that named in the contract for the *Louisiana*.

Mr. LOUD. Who is building it?

Admiral CAPPS. The New York Shipbuilding Company. The contract price in this case will, under normal conditions of labor, afford an extremely small margin, if any. The bid of the Newport News Shipbuilding Company was even less, but could not be accepted, as they were also the lowest bidders for the two armored cruisers.

The CHAIRMAN. So there is active competition?

Admiral CAPPS. The competition has been very active.

Mr. KITCHIN. It was known, however, that the Government was going to build the sister ship at the time?

Admiral CAPPS. In the case of the *Louisiana*; yes, sir.

Mr. KITCHIN. The contract price for the *Louisiana* was greater than the bid made subsequently for a similar ship by the same contractors?

Admiral CAPPS. At the time of the opening of the bids for the *New Hampshire* the Newport News Shipbuilding and Dry Dock Company, which had the contract for the *Louisiana*, bid about \$100,000 less than the New York Shipbuilding Company for the same ship, but they could not be awarded the contract, because Congress had explicitly limited the number that could be given to any one firm to two vessels.

Mr. KITCHIN. How did that bid for the *New Hampshire* compare with the bid for the *Louisiana*?

Admiral CAPPS. By the same firm, \$340,000 less.

Mr. KITCHIN. Less than for the *Louisiana*?

Admiral CAPPS. Yes, sir; less than was bid by the same firm for the *Louisiana* two years before.

Mr. KITCHIN. It looks like when the Government begins to build they try to build ships for less?

Admiral CAPPS. No; so far as I am aware, there has nearly always been keen competition. As indicating that building in Government yards was not the controlling factor it may be noted that the very next year after the *Louisiana* was contracted for the lowest bid price for the *Vermont*, *Kansas*, and *Minnesota* was \$120,000 more than for the *Louisiana*, although they were sister ships of the *Louisiana*, and the next year following the bid prices for the same class of vessel were very much less.

Mr. KITCHIN. Is there any general cause, so far as you know, for these variations in price?

Admiral CAPPS. Of course, the general condition of the labor and material market has to be considered, but even these conditions do not seem to be controlling. Within certain limits, the condition of work at any particular yard has an important bearing. It may be that a certain yard is quite out of work; under such conditions they are apt to—in fact, for business reasons, they must—bid just as low as they deem prudent. They need the work and must have it. If a yard is full of work it can afford to take chances and make a higher bid.

Mr. LOUD. Would it not be more economical for the yard if they had a second ship to build exactly like the first one?

Admiral CAPPS. Unquestionably.

The CHAIRMAN. You do not think any large profits have been made?

Admiral CAPPS. No, sir. I think, on the contrary, that the cost of our ships has been very moderate.

The CHAIRMAN. Is there any combination among any number of the shipyards.

Admiral CAPPS. Not to my knowledge.

The CHAIRMAN. I have heard recently that the Scott yard out in San Francisco was a part of the combination.

Admiral CAPPS. The United States Shipbuilding Company included, among others, the Union Iron Works, of San Francisco, Cal., Harlan & Hollingsworth Company, of Wilmington, Del., and the Bath Iron Works, of Bath, Me.—all of which firms had held contracts for naval vessels at various times; but the United States Shipbuilding Company was soon dissolved, and I believe that the majority of the constituent firms are now acting independently under other ownership. Certainly there are quite a number of prominent shipbuilding firms which are entirely independent of one another, so far as I am aware.

The CHAIRMAN. I wish you would place the names of those firms in the hearing.

Admiral CAPPS. Yes, sir. Of course I know nothing of the details of their corporate organization, but, so far as my knowledge goes, the following shipbuilding firms, which are now doing Government work,

are quite independent of one another: The Bath Iron Works Company, of Bath, Me.; the Fore River Shipbuilding Company, of Quincy, Mass.; the New York Shipbuilding Company, of Camden, N. J.; the Wm. Cramp & Sons Ship and Engine Building Company, of Philadelphia, Pa.; the Newport News Shipbuilding and Dry Dock Company, of Newport News, Va.; the Union Iron Works, of San Francisco, Cal., and the Moran Brothers Company, of Seattle, Wash.

The CHAIRMAN. The next item is "Construction and machinery." On account of hulls and outfits of vessels and steam machinery of hulls heretofore authorized, \$12,713,915.

Admiral CAPPS. That estimate is based upon the actual prospective amount required during the next fiscal year to pay the bills as they become due on vessels building by contract.

The CHAIRMAN. Will that cover all the ships now authorized?

Admiral CAPPS. All the ships authorized, including No. 28.

The CHAIRMAN. That will pay all the bills?

Admiral CAPPS. Yes, sir; under "Construction and machinery" for the next fiscal year.

The CHAIRMAN. Next year what will the amount probably be?

Admiral CAPPS. The fiscal year 1908-9?

The CHAIRMAN. Yes, sir.

Admiral CAPPS. Less than \$7,000,000.

The CHAIRMAN. Will that complete the ships?

Admiral CAPPS. No, sir; there will be work in progress in 1910 and also in 1911. Battle ship No. 28 will carry over until 1911. I presume you want the total cost to complete all the ships heretofore authorized?

The CHAIRMAN. Yes; authorized.

Admiral CAPPS. That will be, for "Construction and machinery," in round numbers, \$44,000,000.

The CHAIRMAN. Can you put in a statement showing how this money will be expended?

Admiral CAPPS. Yes, sir; I will. (See Appendix No. 4.)

The CHAIRMAN. Battle ship No. 28—what ship is that?

Admiral CAPPS. Battle ship No. 28 is the ship plans of which are now before Congress.

The CHAIRMAN. Will the \$44,000,000 include that?

Admiral CAPPS. Yes, sir.

The CHAIRMAN. Irrespective of that, what would be the total amount?

Admiral CAPPS. \$6,000,000 less, or \$38,000,000.

The CHAIRMAN. What part of this estimate of \$12,713,915 asked for this year relates to battle ship No. 28?

Admiral CAPPS. \$1,562,500.

The CHAIRMAN. The plans and specifications for that ship have been sent to Congress?

Admiral CAPPS. The preliminary plans and specifications have been sent to Congress. The Secretary of the Navy sent a letter of transmittal to the Speaker of the House of Representatives and one to the President of the Senate. The documents accompanied the letter addressed to the President of the Senate, I believe.

APPENDIX No. 1.

Statement showing expenditures from appropriation, "Construction and repair, 1907," from July 1 to November 30, 1906.

	Allowed for labor.	Requisitions for material.	Total.
Prior to July 1, 1906.....		\$307,364.27	\$307,364.27
July, 1906.....	\$406,402.00	217,630.09	624,032.09
August, 1906.....	336,917.46	117,652.63	454,570.09
September, 1906.....	336,596.94	93,146.18	429,743.12
October, 1906.....	279,589.48	232,335.63	511,925.11
November, 1906.....	381,455.48	131,204.25	512,659.73
	1,740,961.36	1,099,333.05	2,840,294.41
Less balance unexpended at navy-yards Nov. 30, 1906..	63,250.00		
Less difference between estimated and actual cost on requisitions for material		103,858.38	
	1,677,711.36	995,474.67	2,673,186.03
Naval supply fund and transfers at navy-yards (as reported for July and August and estimated for September, October, and November)			271,289.31
Foreign bills (as reported for July and August and estimated for September, October, and November).....			324,707.23
Miscellaneous (advertising, telegrams, expressage, etc., balance of fiscal year).....			1,000.00
Total			3,270,182.57

Appropriation, "Construction and repair, 1907"	\$7,900,000.00
Expended, etc., as above to December 1, 1906	3,270,182.57
Available balance December 1, 1906	4,629,817.43
Average monthly expenditure for five months ending November 30, 1906.....	654,036.00
Average possible monthly expenditure for seven months to June 30, 1906	661,403.00
(Monthly allotment by division of total appropriation into 12 parts, \$658,333.)	

APPENDIX No. 2.

Statement of expenditures at United States navy-yards and stations from appropriation "Construction and repair" for the fiscal year ended June 30, 1906.

Navy-yard or station.	Labor.	Material.	Total.	Period of time.
Portsmouth	\$287,823.30	\$158,839.31	\$446,662.61	Fiscal year 1906.
Boston	538,734.09	265,183.56	803,917.65	Do.
New York.....	1,145,786.37	668,072.38	1,813,858.75	Do.
League Island.....	434,041.42	186,534.57	620,575.99	Do.
Washington	90,763.32	28,091.29	118,854.61	Do.
Norfolk	628,367.94	380,489.69	1,008,857.63	Do.
Pensacola.....	147,411.82	108,077.02	255,488.84	Do.
Mare Island.....	531,596.91	312,414.24	844,011.15	Do.
Puget Sound.....	235,099.28	78,712.66	313,811.94	Do.
Cavite	400,748.10	346,110.17	746,858.27	Do.
Naval training station	3,182.12		3,182.12	Do.
Naval torpedo station.....	2,837.70	829.17	3,666.87	Do.
Port Royal.....	7,031.63	6,065.18	13,096.81	Do.
Key West	2,904.83	1,026.13	3,930.96	Do.
New Orleans.....	21,977.56	7,452.66	29,440.22	Do.
San Juan.....	2,783.80	2,404.07	5,187.87	Do.
Culebra	240.00		240.00	Do.
Tutuila	152.46	8.91	161.37	Do.
Total.....	4,481,482.65	2,550,321.01	7,031,803.66	

Bureau expenditures.

Open contract, services (labor and material) rendered by outside parties entirely, such as supplying and installation of proprietary articles or other material of special manufacture, when such method of supply and installation is advantageous to the Government; also telephone, telegraph, and other miscellaneous services.....	\$51,684.09
Issues from naval supply fund to vessels in commission and to small stations involving direct charge to appropriation for construction and repairs.....	375,216.00
Public bills, expenditures on vessels in commission authorized by commanding officer in payment for work under cognizance of Bureau of Construction and Repairs (not including Cavite).....	100,960.87
Estimated amount required to meet outstanding obligations for material contracted for and not delivered or for which bills have not been received.....	240,000.00
Total estimated expenditures	7,799,664.62

APPENDIX No. 3.

Statement of expenditures under appropriation "Construction and repair," from July 1, 1905, to June 30, 1906.

[This statement is prepared from data taken from the monthly returns of expenditures sent direct to this Bureau. It will be noted that the titles of charges, as specified in the Navy Regulations, are given, a brief description of the objects of charge under these titles being added thereto.]

	Labor.	Material.	Total.
Titles "D" and "P," repairs to such integral parts of a ship, ordinarily not transferable fixtures, as were objects of direct charge to the hull of the ship, under Title "A," including expenditures for additions, improvements, and alterations in the original construction and arrangements; also repairs made at navy-yards to articles on board ships in commission and originally chargeable to Title "B".	\$2,165,228.88½	\$817,050.09	\$2,982,278.97½
Titles "E" and "F" include charges to stations on account of fixed and movable property, such as dry and other dock, wharves, storehouses, ship houses, machine shops, etc.; also movable property, such as derricks, shears, scows, cranes, pile drivers, and tugs not borne upon the Navy Register, tenders, launches, lighters, boats, etc., not belonging to a receiving or other ship but pertaining to the station proper, etc.; cost of machinery plant, including plant for producing or transmitting power, including engines, shafting, boilers and appurtenances; machinery and machine tools for manufacturing purposes	406,052.77	586,837.08	992,889.85
Title "G," general maintenance, includes cost of upkeep of all yard craft, tools, machinery, appliances, etc., noted under Titles "E" and "F"; also fuel, and hand tools used in general shops, etc.; also care and preservation of all vessels not in commission.....	1,011,879.46½	330,306.00	1,342,185.46½
Title "N" and so much of Title "V" as does not cover pay for holidays. Title "N" includes expenditures for completed models of ships and experimental work in general. Title "V" comprises miscellaneous expenditures for advertising, telegraphing, telephoning, printing, photographing, and express charges, drawing materials, etc.....	108,285.58	22,121.28	130,406.86
Title "V": Payments on account of leave and holidays, in accordance with statute law, no work being given in return therefor.....	305,257.23	.....	305,257.23
Title "Z" embraces the cost of all articles manufactured by the Government for the Naval Establishment and delivered to general storekeepers for issue.....	484,778.72	794,006.56	1,278,785.28
Outfits and stores issued by general storekeepers direct from naval supply fund to vessels in commission.....	.....	375,216.00	375,216.00
Requisitions for services rendered and miscellaneous expenditures for repairs, supplies, etc., to vessels in commission away from navy-yards.....	4,481,482.65	2,925,537.01	7,407,019.66
.....	.....	.....	51,684.09
.....	.....	.....	100,960.87
Total as shown on records of Bureau of Construction and Repair.....	.....	.....	7,559,664.62
Outstanding obligations and unreported expenditures (estimated).....	.....	.....	240,000.00
.....	.....	.....	7,799,664.62

APPENDIX NO. 4.

Statement showing total amount necessary to be appropriated for completion of hulls and machinery of vessels already authorized, this amount including the \$12,713,915 estimated for "Increase of the Navy, construction and machinery," and to be carried by the naval appropriation bill now under consideration.

Class and name of vessel.	Amount.
All ships preliminarily accepted prior to July 1, 1906, with final payments in fiscal year 1907	\$1,474,458
Battle ships:	
Nebraska	936,271
Georgia	261,093
Vermont	853,741
Kansas	895,705
Minnesota	660,705
Mississippi	1,304,469
Idaho	1,408,822
New Hampshire	2,662,282
Battle ship No. 28	6,030,000
South Carolina	4,546,765
Michigan	4,546,765
Armored cruisers:	
California	619,526
South Dakota	753,533
Tennessee	343,473
Washington	442,424
North Carolina	2,749,558
Montana	3,036,281
Protected cruisers:	
St. Louis	281,453
Milwaukee	373,701
Scout cruisers:	
Chester	1,481,804
Birmingham	1,468,392
Salem	1,524,223
Colliers:	
Vestal	1,538,412
Prometheus	1,547,666
Torpedo boat destroyers:	
Nos. 17, 18, and 19	2,250,000
Total	43,991,522

NOTE.—There is included in the above-stated amounts the cost of outfits under the two Bureaus.

APPENDIX NO. 5.

List of new vessels already authorized which will probably be commissioned during the fiscal years 1907, 1908, 1909, and 1910:

December, 1906, to June 30, 1907:	1907-8—Continued.
Battle ships—	Scout cruisers—
Nebraska.	Chester.
Vermont.	Birmingham.
Kansas.	Salem.
Minnesota.	1908-9:
Armored cruisers—	Colliers—
California.	Vestal.
South Dakota.	Prometheus.
1907-8:	1909-10:
Battle ships—	Battle ships—
Mississippi.	South Carolina.
Idaho.	Michigan.
New Hampshire.	
Armored cruisers—	
North Carolina.	
Montana.	

APPENDIX No. 6.

Estimated amount of expenditure on vessels under construction, heretofore authorized, for the fiscal year 1908. Appropriation, "Increase of the Navy; construction and machinery."

Name of vessel.	Amount.	Name of vessel.	Amount.
Nebraska	\$70,000	North Carolina	\$953,137
Vermont	80,000	Montana	1,249,828
Kansas	80,000	Chester	666,106
Minnesota	80,000	Birmingham	575,157
Mississippi	70,000	Salem	674,823
Idaho	225,832	Vestal	662,804
New Hampshire	1,080,070	Prometheus	665,889
South Carolina	1,477,312	Torpedo-boat destroyers Nos. 17, 18,	
Michigan	1,501,886	and 19	878,571
Battle ship No. 28	1,562,500		
California	80,000	Total	12,713,915
South Dakota	80,000		

APPENDIX No. 7.

Statement showing condition of work on vessels under construction for the United States Navy on December 1, 1906.

BATTLE SHIPS.

No.	Name of vessel.	Speed.	Building at—	Per cent of completion.	
				Nov. 1.	Dec. 1.
		<i>Knots.</i>			
14	Nebraska	19	Moran Bros. Co.	97	97.5
18	Connecticut	18	Navy-yard, New York	99.72	99.72
20	Vermont	18	Fore River Shipbuilding Co.	95	96
21	Kansas	18	New York Shipbuilding Co.	93.1	95.2
22	Minnesota	18	Newport News Shipbuilding Co.	97	98
23	Mississippi	17	Wm. Cramp & Sons	67.82	69.6
24	Idaho	17	.....do	64.03	65.15
25	New Hampshire	18	New York Shipbuilding Co.	54.3	57
26	South Carolina		Wm. Cramp & Sons .....	.6	3.14
27	Michigan		New York Shipbuilding Co. ....	.85	1.51

ARMORED CRUISERS.

6	California	22	Union Iron Works	96.1	97
9	South Dakota	22	.....do	93.4	93.5
12	North Carolina	22	Newport News Shipbuilding Co.	63.28	66.35
13	Montana	22	.....do	36.84	60.62

PROTECTED CRUISER.

21	Milwaukee	22	Union Iron Works	99.4	99.9
----	-----------------	----	------------------------	------	------

TRAINING SHIPS.

....	Cumberland	Sails..	Navy-yard, Boston	99.9	99.9
....	Intrepid	Sails..	Navy-yard, Mare Island	100	.....

SCOUT CRUISERS.

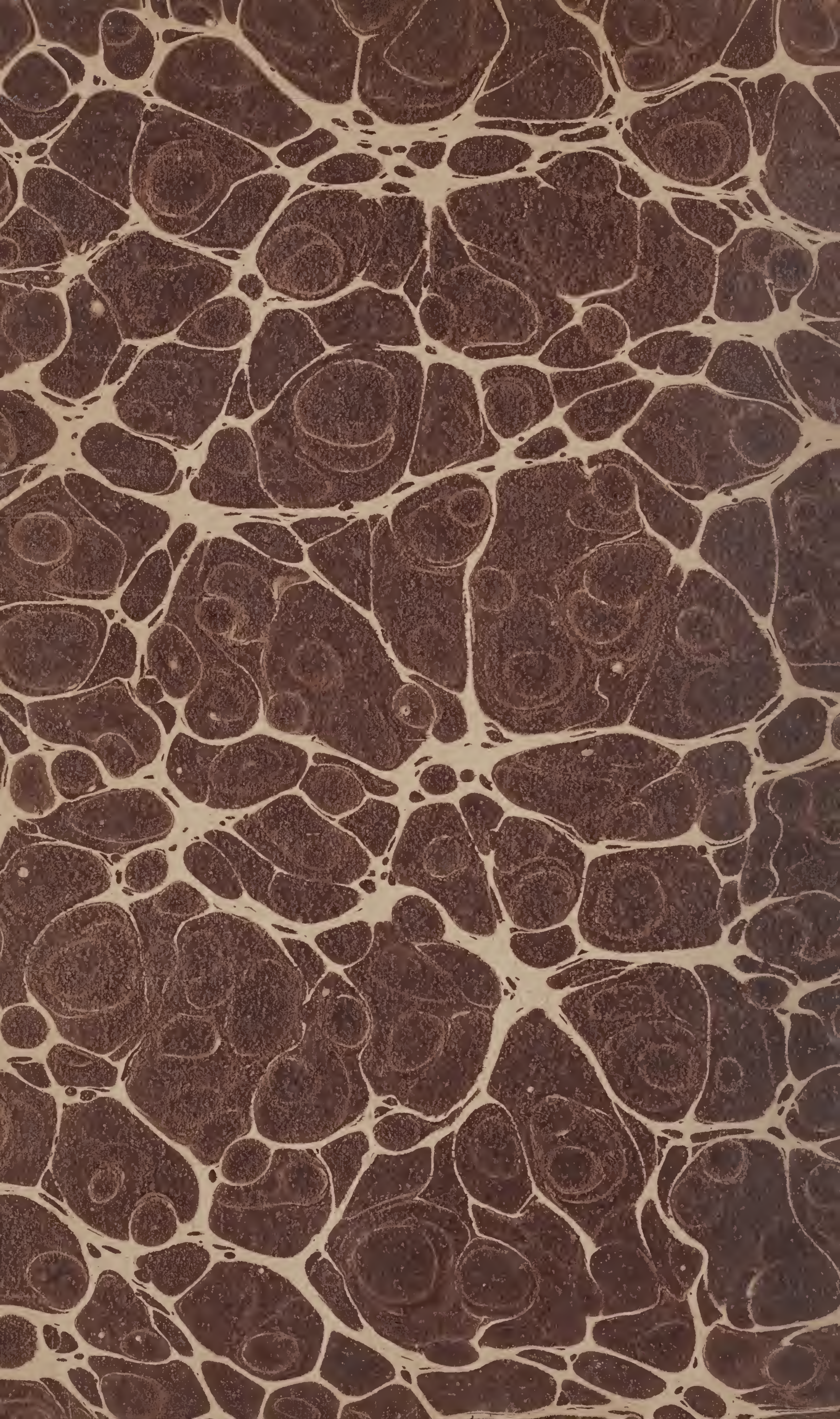
....	Chester		Bath Iron Works	51.9	54.83
....	Birmingham		Fore River Ship Building Co.	50.7	53.7
....	Salem .....		.....do	50.7	54

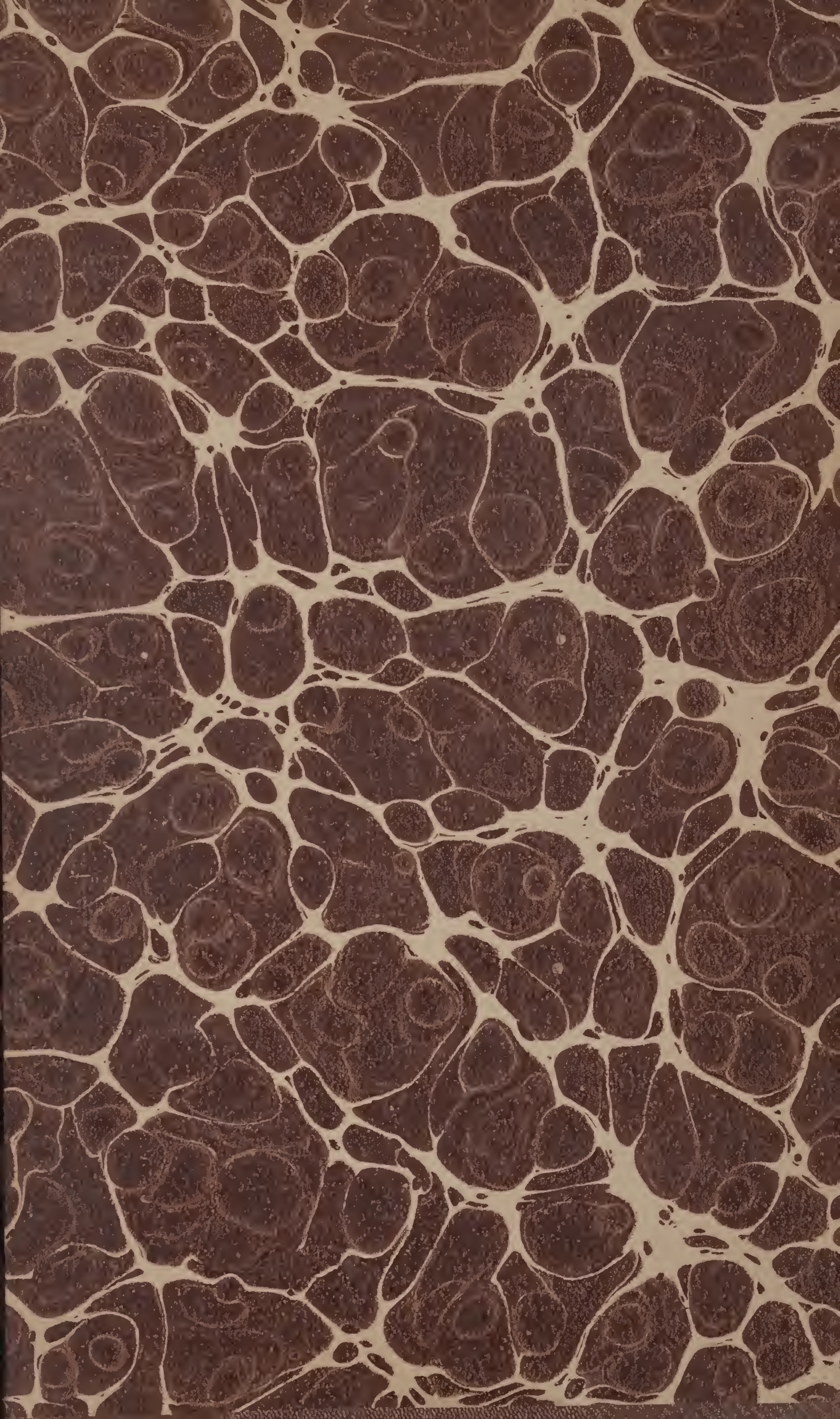
Statement showing condition of work on vessels under construction for the United States Navy on December 1, 1906—Continued.

SUBMARINE TORPEDO BOATS.

No.	Name of vessel.	Speed.	Building at—	Per cent of completion.	
				Nov. 1.	Dec. 1.
		<i>Knots.</i>			
....	No. 9.....	.....	Fore River Ship Building Co.....	90	90
....	No. 10.....	.....	do	81.5	82.72
....	No. 11.....	.....	do	92	92
....	No. 12.....	.....	do	78.8	81.1

○





LC FT. MEADE



0 018 998 466 2